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Arizona Occupational Profile

A Labor Market Information Publication of the Department of Economic Security

Transportation, Communications, and Public Utilities

UTAH
COCONINO
MOHAVE
KINGMAN
FLAGSTAFF
NAVAJO
APACHE
HOLBROOK
ST. JOHNS
CALIFORNIA
PRESCOTT
YAVAPAI
NEW MEXICO
PARKER
LA PAZ
GILA
PHOENIX
GLOBE
CLIFTON
GREENLEE
MARICOPA
FLORENCE
SAFFORD
YUMA
PINAL
YUMA
GRAHAM
TUCSON
PIMA
COCHISE
MEXICO
SANTA CRUZ
BISBEE
NOGALES
ARIZONA

OCCUPATIONAL PROFILE

The value of current and accurate occupational employment information has long been recognized by job seekers, public and private administrators, and those involved in training, recruiting, and counseling. A major source of this information in Arizona is the Occupational Employment Statistics (OES) Program - a cooperative effort between Arizona and the U. S. Bureau of Labor Statistics.

This Occupational Profile is one in a series of publications produced from information developed by the Occupational Employment Statistics survey. These publications represent one of several occupational employment information delivery systems incorporating OES survey data. The survey is used to collect employment data, by county, for over 1,000 occupations in Arizona. From these surveys, which require the cooperation of the Arizona business community, current employment in the various occupations is determined, and from this an occupational outlook is formulated. The Occupational Profiles contain the survey findings and examine, individually, the industries of Arizona.

Surveyed industries include:

Mining
Construction
Manufacturing
Transportation, Communications, and Public Utilities
Trade
Finance, Insurance, and Real Estate
Services
Government

For further information, or to comment on any aspect of this program, please write to the address on the back cover.

INDUSTRY INFORMATION

INDUSTRY DEFINITION

The industry division designated as transportation, communication, and public utilities includes establishments providing passenger and freight transportation, communication services, and electricity, gas, steam, water, or sanitary services.

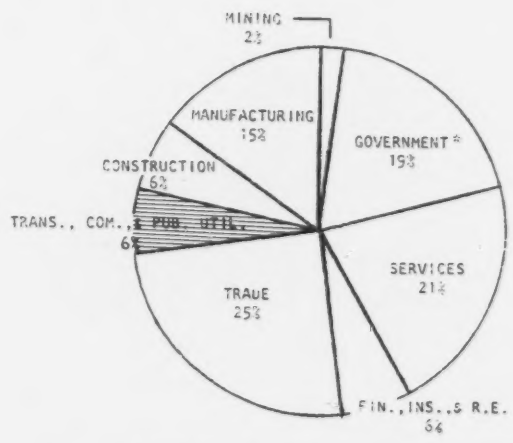
A detailed description of these industries is found in the Standard Industrial Classification (SIC) Manual[1] under codes 40 through 49. Employment data for the U. S. Postal Service (SIC code 43) is not included in this publication. In addition, the occupational data includes certain services rendered by state and local governments, e.g., irrigation and fire-protection.

Often referred to as the regulated industries, transportation, communications, and public utilities are grouped together because they provide a public service and are often owned or regulated by public agencies. The regulations vary from industry to industry, but, in general, their goals are to ensure fair prices and to see that the public interest is served.

INDUSTRY CHARACTERISTICS

Employing approximately 56,000 in 1982, the transportation, communication, and public utilities (TCPU) industry accounts for about 6 percent of Arizona's 1 million workers. Employment in transportation services totals more than 24,000, while those working in the public utilities and communication industries number 19,000 and 18,000, respectively.

FIGURE 1: ARIZONA NONAGRICULTURAL EMPLOYMENT, 1982

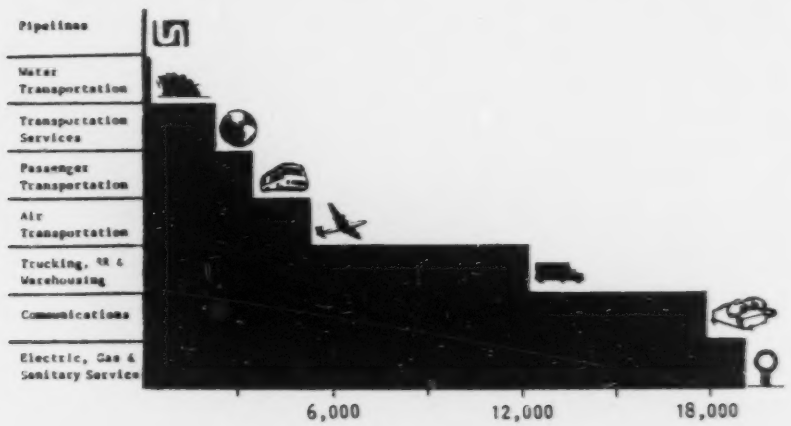


* Includes education

[1] Office of management and Budget, *Standard Industrial Classification Manual, 1972 Edition*, pp. 219-239.

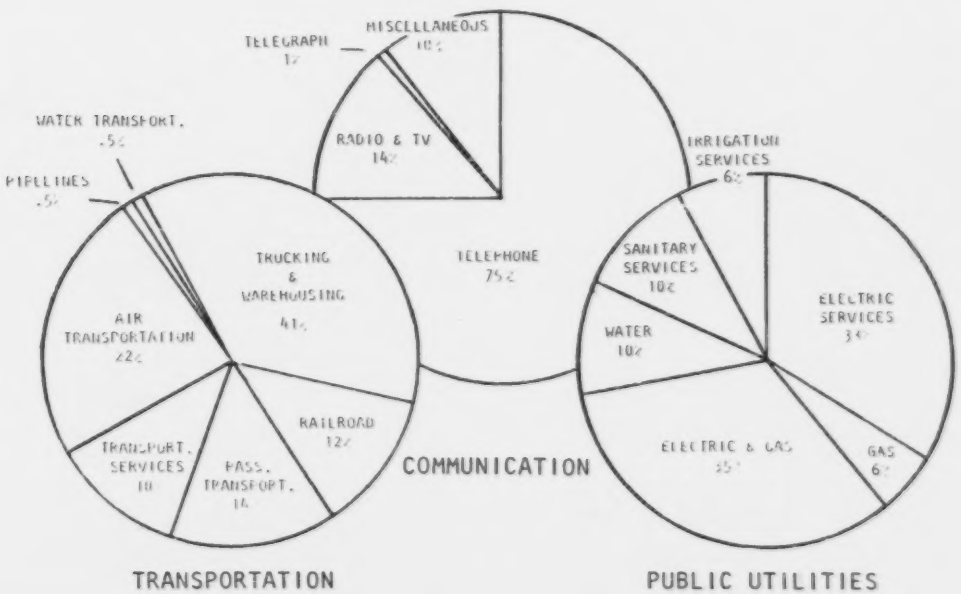
Predominant in the transportation industry are truckers who account for forty percent of the sector's employment. At the other extreme are pipeline workers transporting coal slurry or petroleum, and water transportation workers, many of whom provide sightseeing and river running trips and excursions on the Colorado River.

FIGURE 2: TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES (TCPU) EMPLOYMENT IN ARIZONA, 1982



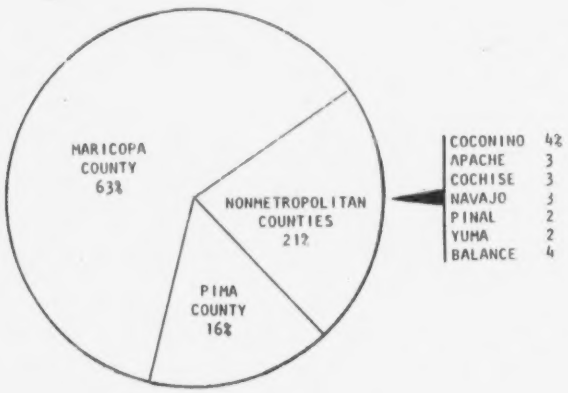
The public utilities sector includes providers of water, electric, gas, and sanitary services. Three of every four workers in this category are involved in the production and distribution of energy. The remainder is divided among water, sanitary, and irrigation services.

FIGURE 3: EMPLOYMENT DISTRIBUTION WITHIN TCPU, 1982



Geographically, nearly two-thirds of Arizona's TCPU employment is located in Maricopa County where communication and transportation services are concentrated. Seventy percent of the state's communication

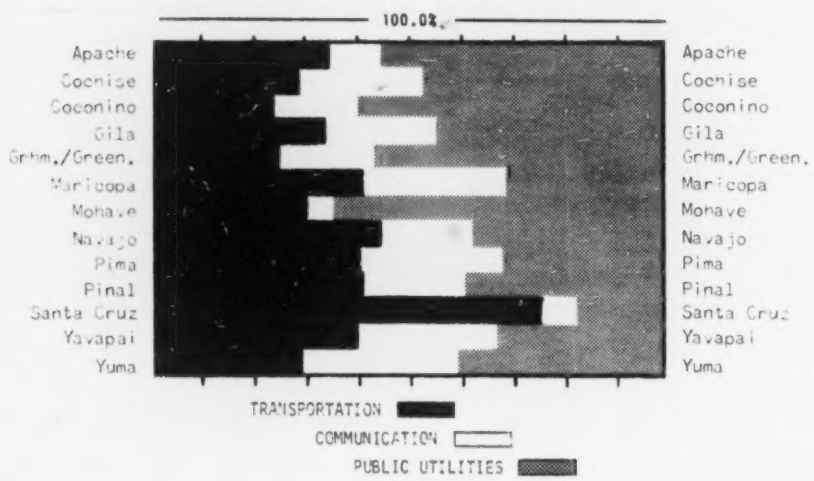
FIGURE 4: GEOGRAPHIC DISTRIBUTION OF TCPU EMPLOYMENT



employees and 75 percent of the airline and trucking industry employment are located in the Phoenix metropolitan area. In addition to requiring the services of these industries to satisfy the needs of its population, the state's major population center is also the administrative center for many of the industry's firms.

TCPU employment in several of the nonmetropolitan counties is dominated by public utilities as indicated by the following graph. Power generating plants in Apache, Coconino, and Navajo Counties and relatively small transportation and communication components in Mohave County account for this profile. Dominant in Santa Cruz County is the transportation sector

FIGURE 5: DISTRIBUTION OF TCPU IN ARIZONA'S COUNTIES

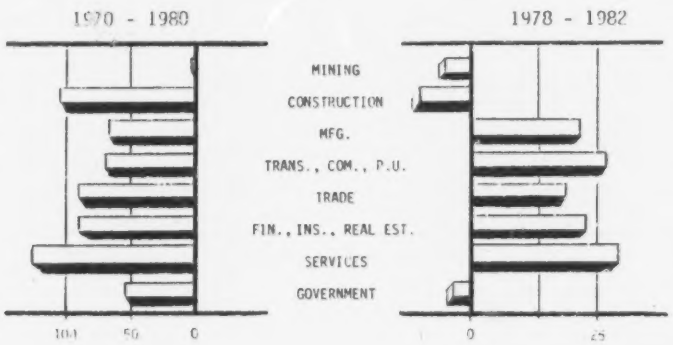


whose employees are primarily truck drivers who service the trade center of Nogales on the U. S. - Mexico border.

INDUSTRY TRENDS

Characterized by consistent and predictable growth as it responds to the needs of a growing population and an expanding economy, employment in TCPU increased by more than 70 percent during the decade of the 70s. Although falling short of the average growth rate for all industries, TCPU boasts a year-to-year consistency unmatched by any other major industry division. Even during the most recent recession, TCPU managed a 10 percent employment increase for the period 1980-1982, while the change for all Arizona industry was a mere 1.5 percent.

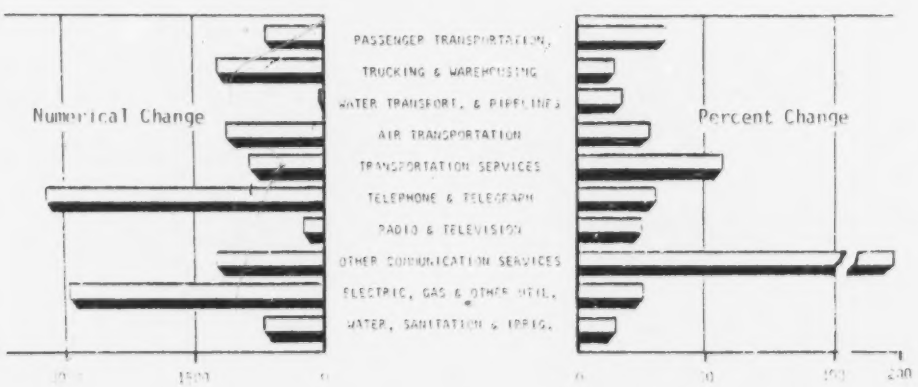
FIGURE 6: EMPLOYMENT CHANGE IN ARIZONA'S INDUSTRIES (PERCENT)



Since 1970, both the communication and public utilities industries have doubled their employment while the transportation sector has expanded about 65 percent. In recent years, the communication industry has created about 1,250 new jobs annually as compared to about 1,050 in transportation services and 925 in the public utilities.

Examination of TCPU employment data at a more detailed level reveals that miscellaneous communication services have grown the fastest since 1978. Led by the youthful pay-TV industry, employment in this catch-all category increased nearly 200 percent during the period.

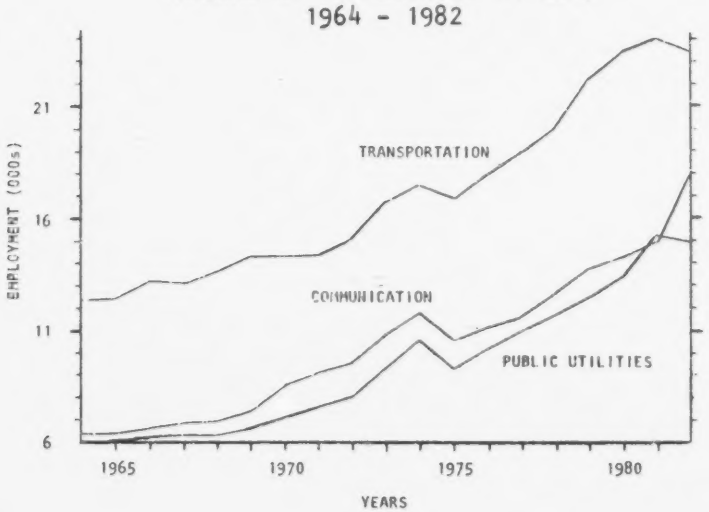
FIGURE 7: EMPLOYMENT CHANGE IN TCPU, 1978 - 1982



The communication industry will continue to experience strong growth through the 1980s. Because of technological achievements, however, employment expansion will likely not be as great as might be suggested by the ever-increasing variety of available communication services and the number of subscribers to these services. More assured, though, is the dynamic era that the communication industry has already entered. The structure of the telephone industry, for example, is changing as a result of competition, regulatory reform and the application of new technology. The traditional common carriers are competing with non-regulated computer and interconnect companies, specialized carriers, and domestic satellite companies.

During the decade, data communications will grow faster than the traditional voice services. Digital electronic switching, satellite communications, local data networks, and fiber-optic transmission are paving the way for a variety of new data communication services, such as electronic mail, on-line information systems, and many high-speed business communication services. As business offices become more automated, data transmissions will obviously grow.

FIGURE 8: EMPLOYMENT IN TCPU
1964 - 1982

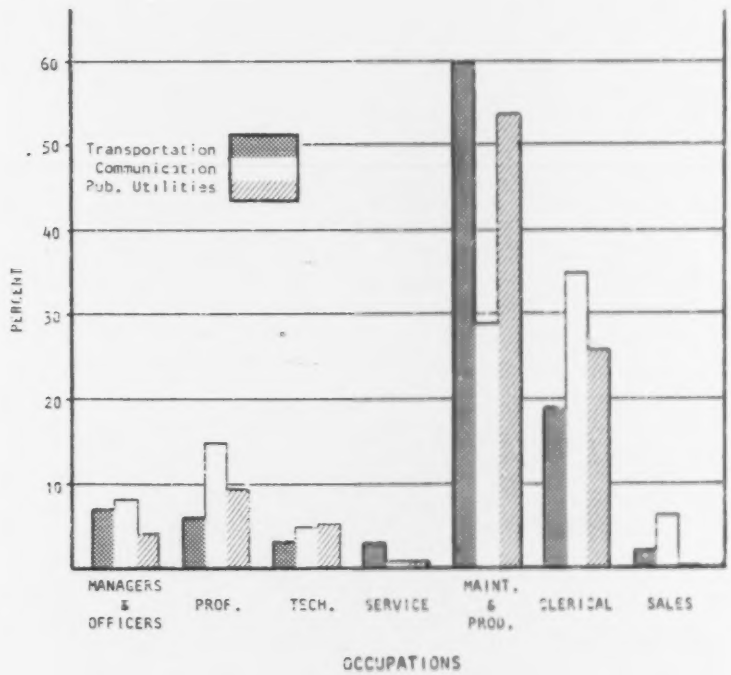


A similar restructuring is also taking place in television and radio broadcasting. Challenging the dominance of network programming is subscription TV and other services brought about, to a large degree, by significant technical advances made during recent years. With the advent of communications satellites, cable television has realized significantly increased viewership. In the wings are other program distribution systems vying for acceptance in this rapidly changing arena. One of these is the multiple distribution service (MDS) which relays TV signals from a central station to receivers installed in hotels, office buildings and individual residences. And then there is the direct broadcast satellite service (DBS) which, as currently conceived, would relay signals directly to receivers of individual subscribers in the home or workplace.

OCCUPATIONAL INFORMATION

Maintenance and production workers dominate employment in transportation, communications, and public utilities. This dominance reflects the many truck drivers in the transportation industry and the maintenance and craftworkers in the public utilities sector. The largest single occupation in TCPU is, in fact, tractor trailor truck drivers with employment of nearly 3,000. Other prominent occupations in this diverse occupation group are bus drivers, delivery and route workers, maintenance repairers, and line installers.

FIGURE 9: MAJOR OCCUPATIONAL CATEGORIES
IN TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES, 1982



Clerical workers represent the second largest occupational group with employment of 16,000. Especially concentrated in firms providing communication services, clerical workers are common to all industries, and, for this reason, employment of general office clerks trails only tractor-trailer drivers in total employment. Also numerically prominent in the communication industry are central office operators (switchboard operators) and customer service representatives - further contributing to the size of the clerical category.

Trailing clerical workers in employment are professionals with 8 percent of the industry's employment. Most numerous in this category are travel agents and/or accomodations appraisers, electrical and electronic engineers, and radio and TV announcers.

The occupational distribution of Arizona's TCPU employment, as shown in figure 9, is consistent with the State's two major metropolitan areas. However, with fewer regional offices and administrative complexes, the "balance of state" or nonmetropolitan counties employ a significantly greater number of maintenance and production workers and fewer clerical personnel.

Employment in each of the seven major occupational classes will continue to expand - although at different rates. Professional and technical occupations will see their share of total industry employment increase the most, while clerical workers and laborers will likely lose.

Although its share is decreasing, clerical workers will provide many employment opportunities to job seekers. In addition to openings resulting from growth, turnover is relatively high in most clerical occupations and many openings will result from occupational transfers and departures from the labor force. General office clerks, the most numerically significant clerical occupation, will realize nearly 5,000 job openings during the projection period - 1,600 due to growth and the remainder due to labor force separation.

Nationally, employment of central office operators has established a pattern of declines that began more than 25 years ago. In Arizona, increased service demand will somewhat offset reduced labor requirements brought about by a variety of technological innovations. To the public, one obvious manifestation of these innovations is the increasing use of computer-assembled speech.

FIGURE 10: OCCUPATIONS MOST FREQUENTLY REPORTED IN TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

Occupations	Estimated 1982 Employment	Percent of Sector Total
TRANSPORTATION		
Tractor Trailor Truck Drivers	2,936	12.6%
Managers & Officers	1,674	7.2
Bus Drivers	1,420	6.1
Travel Agents/Accomodation Appr.	1,068	4.6
Delivery & Route Workers	1,043	4.5
Truck Drivers, Heavy	1,013	4.4
Ticket Agents	758	3.3
General Office Clerks	709	3.0
Line Service Attendants	597	2.6
Aircraft Mechanics	574	2.5
COMMUNICATION		
Managers & Officers	1,759	10.0%
Customer Service Representative	1,020	6.0
Central Office Operators	863	5.1
General Office Clerks	674	4.0
Supervisors, Nonworking	582	3.4
Central Office Repairers	555	3.3
Directory Asssistance Operators	538	3.2
Electrical & Electronic Engineers	520	3.1
Station Installers	503	3.0
Announcers	490	2.9
PUBLIC UTILITIES		
Line Installers/Repairers	695	4.8%
Supervisors, Nonworking	658	4.5
Managers & Officers	613	4.2
General Office Clerks	538	3.7
Maintenance Repairers, General Ut.	485	3.4
Meter Readers, Utilities	463	3.2
Secretaries	457	3.2
Customer Service Representatives	448	3.1
Trades Helpers	409	2.8
Electrical & Electronic Engineers	373	2.6

Contributing to the demand for switchboard operators are new and expanding businesses and organizations that employ private branch exchange (PBX) switchboard operators to handle internal incoming and outgoing calls.

Two occupations comprise about 50 percent of the employment in the professional workers category. Engineers and travel agents and/or accomodations appraisers account for 2,000 of the industry's 4,000 professionals. Although sensitive to economic conditions, employment of travel agents will expand more rapidly than the average for all occupations - providing 300 job opportunities through 1986. A result of

expanded business activity, rising incomes, and a greater emphasis on leisure activities, more people are traveling more frequently than in the past and creating a demand for transportation service workers.

Representing the largest professional occupation and underlying the increasing share of professional and technical workers in Arizona's TCPU industry is the number of workers with engineering skills. Contributing to this evolution is the introduction of nuclear power generation in Arizona. According to the Bureau of Labor Statistics, nearly half of the nations's nuclear industry workforce are engineers, scientists and technicians. Marlene Shelton, Employment Supervisor at Arizona Public Service, forsees a heightened demand for electrical engineers with power-generation experience and for nuclear engineers - nearly all of which are recruited from other areas of the country that have nuclear power plants.

Other activities in electric power generation that require engineering skills include research and development, system planning, design, construction and installation, system operation and maintenance and test engineering.

In the communication industry, engineers plan cable and microwave routes, central office and PBX equipment installations, and communication systems for new buildings, as well as engage in the development of new equipment.

Maintenance and production occupations, the largest occupational group, will provide an estimated 5,500 job openings through 1986. One-fourth of these openings will be for truck drivers, with the greatest portion of these for tractor-trailor drivers. However, those who haul locally will see their numbers increase more rapidly than long-distance haulers. Anticipated growth in business activity will result in more freight to be distributed and since trucks carry virtually all local freight, employment of these drivers is expected to increase substantially.

FIGURE 11: OCCUPATIONS WITH THE GREATEST NUMBER OF OPENINGS IN TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

Occupations	Job Opportunities (Exc. Turnover) 1982-1986
TRANSPORTATION	
Tractor Trailor Truck Drivers	743
Manager & Officers	513
Bus Drivers	372
Travel Agents	321
General Office Clerks	256
Delivery & Route Workers	252
Truck Drivers, Heavy	248
Ticket Agents	228
Line Service Attendants	176
Flight Attendants	166
COMMUNICATION	
Managers & Officers	379
Central Office Operators	296
Customer Service Representatives	294
General Office Clerks	195
Directory Assistance Operators	183
Typists	147
Supervisors, Nonworking	107
Statistical Clerks	102
Central Office Repairers	86
Sales Reps., Agents, and/or Assoc.	85
PUBLIC UTILITIES	
General Office Clerks	156
Secretaries	137
Managers & Officers	133
Customer Service Representatives	129
Supervisors, Nonworking	124
Line Installers/Repairers	92
Maintenance Repairers, General Util.	81
Trades Helpers	77
Meter Readers, Utilities	66
Electricians	58

As in other industries, employment increases created by a growing demand for services are being tempered by development of more efficient equipment and procedures. These dynamics are particularly evident in maintenance and production occupations, where technological innovation is bringing greater productivity.

FIGURE 12: OCCUPATIONS WITH THE GREATEST EMPLOYMENT IN TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES

	Employment 1982	Job Openings* 1982-1986
Managers and Officers	4,047	1,029
Tractor-Trailer Truck Drivers	2,944	745
General Office Clerks	1,921	610
Supervisors, Nonworking	1,704	364
Customer Service Representatives	1,468	424
Bus Drivers	1,420	372
Travel Agts. and/or Accomodations Appraisers	1,068	322
Delivery and Route Workers	1,050	254
Truck Drivers, Heavy	1,013	248
Electrical and Electronic Engineers	896	119
Central Office Operators	863	297
Secretaries	771	256
Maintenance Repairers, General Utility	768	159
Ticket Agents	765	230
Line Installers/Repairers	757	101
Accounting Clerks	707	222
Clerical Supervisors, Office or Plant	598	131
Line-Service Attendants	597	176
Dispatchers, Vehicle, Service or Work	593	140
Mechanics, Aircraft	574	108
Trades Helpers	562	112
Central Office Repairers	555	86
Typists	546	184
Directory Assistance Operators	538	183
Stock Clerks, Stockroom, Warehouse or Storage	538	119
Diesel Mechanics (Exc. Auto & Engineer Equip.)	518	121
Station Installers	503	66
Announcers	490	72
Sales Reps., Agents and/or Associates	475	101
Installer, Repairer, and/or Section Maintainers	465	61
Meter Readers, Utilities	463	66
Truck Driver Helpers	444	129
Electrical and Electronic Technicians	436	58
Electricians	434	78
Mechanics, Automotive	381	79

* Does not include turnover.

Yet to be significantly exploited are the nonentertainment uses of cable systems, such as for two-way communications, data bank access, and alarm systems. Currently focusing on the public's hunger for entertainment and sports programming, the industry will undoubtedly respond to any adequate market demand for these ancillary services.

Dominated by employment in motor freight services, the transportation industry will respond to the requirements of the state's expanding economy and the heightened profile of Phoenix and Tucson as regional trade and manufacturing centers. Although the verdict is not yet in on the effects of recent national and local trucking deregulation, employment in the industry is to a great degree affected by the health of the national economy. Although the trend is for a moderate growth rate through 1986, it will not be without periodic variation. Likewise, the air traffic industry will react to the cyclical swings of the economy. In the long run, however, expected growth in airline passenger and cargo traffic will more than balance out the potential impact of advanced communications systems that may limit growth in business travel by corporate executives. Employment in Arizona's airline industry will continue to benefit from the passage of the Airline Deregulation Act of 1978 which sent carriers scrambling to expand services on lucrative Sunbelt routes. Phoenix Sky Harbor International Airport, for example, is currently served by 20 carriers, as compared to eight in 1978.

Employment growth in utilities relates primarily to increasing consumption of electricity, gas, and water. Reflecting the industry's capital-intensive nature, however, output and productivity increases will not be matched by employment increases of the same magnitude. For example, due to the use of automatic controls and larger, more efficient equipment, employment will not increase as fast as electric power production. Similarly, the Palo Verde Nuclear Generating Station will generate more power, yet employ comparatively fewer people than older power plants. Still, the Palo Verde nuclear power plant, located 40 miles southwest of Phoenix, will have a profound effect on local public utility employment. Scheduled for operational status in late 1985, the first unit is expected to be followed by an additional start-up in each of the following two years.

OCCUPATIONAL STRUCTURE

The following tables provide employment estimates and projected employment and job openings for the counties and the state. A table for La Paz County is not included as the survey was conducted prior to this county's creation.

When using the data, please note the following:

1) The data reflect full and part-time wage and salary employment only, and do not include self-employed or unpaid family workers.

2) "Total Job Openings" represents the number of openings due to growth of the industry and separations from the labor force. They do not account for labor turnover, i.e., openings created when a worker changes jobs, leaving the job to be filled by someone else. These vacancies are often the largest source of job openings.

3) The projection technique does not possess the degree of accuracy that may be implied by small employment and demand figures.

4) To eliminate the possible disclosure of confidential employer information, occupations have been added to the appropriate "all other" or residual category if: less than three firms reported a single occupation; one firm reported more than 50 percent of the occupational estimate; two firms combined reported more than 75 percent of the occupational estimate. In certain cases, releases have been obtained from large employers to waive the confidentiality criteria.

5) Not reflected in the tables is the employment impact created by the start-up of a major power plant in Apache County expected to employ approximately 400 in 1986.

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

STATEWIDE

	Estimated 1982 Employment	Percent of Total 1982 Employment	Projected 1986 Employment	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	4,078	7.5	4,522	1,034
Managers & Officers	4,047	7.5	4,489	1,029
Pilots, Ship	16	.0	17	2
All Other Managers	15	.0	16	3
TOTAL PROFESSIONAL WORKERS	4,538	8.3	4,984	937
Chemical Engineers	10	.0	11	1
Civil Engineers	83	.2	91	19
Electrical & Electronic Engineers	896	1.6	962	119
Industrial Engineers	16	.0	18	3
Mechanical Engineers	110	.2	118	15
All Other Engineers	164	.3	176	25
Natural & Mathematical Scientists	47	.1	51	11
All Other Natural & Mathematical Scientists	6	.0	8	2
Systems Analysts, Electronic Data Processing	180	.3	194	22
Teachers, Vocational Education or Training	13	.0	16	5
Photographers	68	.1	73	12
Television Camera Operators	80	.2	86	12
Purchasing Agents &/or Buyers	79	.1	87	18
Accountants & Auditors	279	.5	305	68
Announcers	490	.9	527	72
Broadcast News Analysts	117	.2	126	17
Commercial Artists	25	.1	27	6
Writers &/or Editors	107	.2	115	27
Film Editors	29	.1	31	7
Lawyers	33	.1	36	6
Librarians, Professional	14	.0	15	4
Personnel & Labor Relations Specialists	177	.3	192	36
Public Relations Practitioners	13	.0	14	3
Reporters &/or Correspondents	130	.2	140	33
Right-of-Way Agents	46	.1	49	9
Technical Directors	37	.1	40	5
Travel Agents &/or Accommodations Appraisers	1,068	2.0	1,229	322
All Other Professional Workers	221	.4	247	58
TOTAL TECHNICAL WORKERS	2,236	4.1	2,462	467
Computer Programmers	176	.3	194	27
Drafters	182	.4	196	28
Electrical & Electronic Technicians	436	.8	469	58
Surveyors (Excl. Surveyor Helpers)	33	.1	36	5
Mechanical Engineering Technicians	6	.0	6	1
Video Recording Engineers	9	.0	10	1
Broadcast Technicians	175	.3	188	23
Estimators & Drafters, Utilities	170	.3	182	26
All Other Engineering Technicians	334	.6	359	61
All Other Science Technicians	3	.0	3	1
Airplane Pilots	372	.7	437	87
Radio Operators	25	.1	29	7
Emergency Med. Techs. (Excl. Ambulance Attends.)	135	.2	156	107
All Other Technicians	180	.3	197	35
TOTAL SERVICE WORKERS	953	1.7	1,112	337
Janitors, Porters & Cleaners	221	.4	246	66
Guards & Doorkeepers	76	.1	86	14
Food Service Workers (Exclude Cashiers)	38	.1	40	9
All Other Food Service Workers	3	.0	4	1
Flight Attendants	328	.6	397	164
Supervisors, Nonworking - Service	44	.1	51	12
Guides, Travel (Excl. Estab. or Sightseeing)	6	.0	7	2
Baggage Porters	172	.3	209	49
All Other Service Workers	65	.1	72	18
TOTAL MAINTENANCE & PRODUCTION WORKERS	25,862	47.3	28,894	5,512
Mechanics, Aircraft	574	1.0	646	108
Mechanics, Automotive	381	.7	428	79

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

STATEWIDE (CONTD.)

	Estimated 1982 Employment	Percent of Total 1982 Employment	Projected 1986 Employment	Total Job Openings 1982-1986
Diesel Mechanics (Excl. Auto & Eng. Equip.)	518	1.0	592	121
Electrical Instrument Repairers	113	.2	121	18
Electric Meter Installers & Removers	80	.1	86	11
Gas Meter Installers	13	.0	14	2
Engineering Equipment Mechanics	28	.1	32	6
Hydroelectric Machine & Powerhouse Mechs.	63	.1	68	11
Mechanics, Maintenance (Excl. Millwrights)	249	.5	270	44
Power-Transformer Repairers	156	.3	167	25
Radio Mechanics	350	.6	378	52
Treatment Plant Mechanics	89	.2	95	14
Electronic Mechanics	58	.1	63	9
Gas & Electric Appliance Repairers	85	.2	92	17
All Other Mechanics & Repairers	409	.8	454	104
Truck Drivers	419	.8	459	71
Truck Drivers, Heavy (Excl. Tractor-Trailer)	1,013	1.9	1,182	248
Truck Drivers, Light (Excl. Delivery & Route)	207	.4	243	52
Tractor-Trailer Truck Drivers	2,944	5.4	3,463	745
Baggage Handlers	100	.2	118	30
Ballast Cleaning & Tamping Machine Operators	50	.1	56	13
Bus Drivers	1,420	2.6	1,595	372
Cable Installers	290	.5	312	32
Cable Repairers	233	.4	251	31
Cable Splicers	332	.6	357	37
Carpenters (Excl. Cabinetmakers)	63	.1	69	14
Central Office Repairers	555	1.0	596	86
Cleaners, Vehicle	199	.4	232	44
Control Room Operators, Steam	80	.1	86	17
Corrosion Control Fitters	24	.1	26	5
Crane, Derrick & Hoist Operators	48	.1	52	8
Delivery & Route Workers	1,050	1.9	1,227	254
Electricians	434	.8	470	78
Auxiliary Equipment Operators	222	.4	240	47
Supervisors, Nonworking	1,704	3.1	1,876	364
Frame Wirers	224	.4	241	29
Gas Pumping Station Operators	80	.2	87	16
Ground Workers, Utilities	167	.3	180	45
Heavy Equipment Operators	234	.4	253	39
Industrial Truck Operators	122	.2	141	28
Inspectors	120	.2	129	27
Installers, Repairers &/or Section Maintainers	465	.9	500	61
Instrument Repairers	166	.3	179	28
Line Installers/Repairers	757	1.4	815	101
Machinists	362	.7	404	80
Maintenance Repairers, General Utility	768	1.4	856	159
Helpers, Trades	562	1.0	610	112
Oilers	21	.0	22	4
Painters, Automotive	9	.0	10	2
Painters, Maintenance (Excl. Production)	48	.1	52	10
Pipelayers	15	.0	16	3
Plumbers &/or Pipefitters	42	.1	46	8
Power Reactor Operators	36	.1	39	6
Station Engineers, Main Line	6	.0	6	1
Refuse Collectors	160	.3	174	25
Sewage Plant Operators	24	.1	26	3
Station Installers	503	.9	541	66
Stationary Boiler Firers	10	.0	11	2
Stationary Engineers	78	.1	84	15
Substation Operators	36	.1	39	6
Switchboard Operators, Generating Plant	16	.0	17	3
Taxi Drivers	178	.3	204	53
Trouble Locators, Test Desk	285	.5	306	37
Tire Fabricators &/or Repairers	5	.0	6	1
Trouble Shooters, Power Line	104	.2	112	17
Turbine Operators	64	.1	69	13

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

STATEWIDE (CONTD.)

	Estimated 1982 Employment	Percent of Total 1982 Employment	Projected 1986 Employment	Total Job Openings 1982-1986
Water Treatment Plant Operators	23	.0	25	4
Pump Station Operators, Waterworks	128	.2	137	20
Welders & Flamecutters	269	.5	294	56
Fuel Pump Attendants &/or Lubricators	39	.1	42	8
Tire Changers	23	.0	26	6
Surveyor Helpers	41	.1	45	8
Dispatchers, Load	15	.0	16	2
Truck Driver Helpers	444	.8	520	129
Line-Service Attendants	597	1.1	702	176
Pipeliners	6	.0	6	1
Painters, Aircraft	26	.1	30	6
Bus Drivers, School	31	.1	32	5
Ambulance Drivers &/or Attendants	189	.3	201	38
Tree Trimmers	69	.1	74	18
Motorboat Operators	18	.0	19	3
All Other Skilled Craft Workers	1,375	2.5	1,525	334
All Other Operatives & Semiskilled Workers	676	1.2	728	128
All Other Laborers & Unskilled Workers	1,673	3.1	1,881	401
TOTAL CLERICAL WORKERS	16,149	29.5	17,742	4,762
Bookkeeping &/or Billing Machine Operators	159	.3	175	46
Computer Operators	92	.2	100	18
Keypunch Operators	145	.3	158	45
Peripheral EDP Equipment Operators	95	.2	104	31
All Other Office Machine Operators	65	.1	70	23
Stenographers	135	.2	147	41
Accounting Clerks	707	1.3	789	222
Reservation Agents	140	.3	166	46
Bookkeepers, Hand	184	.3	204	57
Adjustment Clerks	182	.3	199	56
Cashiers	185	.3	204	58
Collectors	79	.1	85	18
File Clerks	145	.3	158	52
General Clerks, Office	1,921	3.5	2,113	610
Information Clerks	78	.1	92	35
Order Clerks	33	.1	36	10
Payroll &/or Timekeeping Clerks	93	.2	104	28
Personnel Clerks	54	.1	59	20
Private Branch Service Advisors	11	.0	12	3
Receptionists	53	.1	59	20
Secretaries	771	1.4	848	256
Statistical Clerks	365	.7	393	106
Switchboard Operators	332	.6	376	134
Switchboard Operators/Receptionists	74	.1	83	28
Ticket Agents	765	1.4	890	230
Traffic Clerks	90	.2	97	26
Typists	546	1.0	590	184
Clerical Supervisors, Office or Plant	598	1.1	655	131
Directory Assistance Operators	538	1.0	577	183
Telegraph Operators	45	.1	51	11
Central Office Operators	863	1.6	929	297
Station Agents	50	.1	56	13
Customer Service Representatives	1,468	2.7	1,576	424
All Other Office Clerical Workers	1,430	2.6	1,546	425
Meter Readers, Utilities	463	.8	498	66
Production Clerks &/or Coordinators	224	.4	241	41
Shipping Packers	180	.3	211	52
Shipping &/or Receiving Clerks	371	.7	408	70
Stock Clerks, Stockroom, Warehouse or Storage	538	1.0	595	119
Meter Readers, Taxi or Bus	9	.0	11	4
Dispatchers, Airplane	28	.1	32	5
Transportation Agents	230	.4	264	66
Dispatchers, Vehicle, Service or Work	593	1.1	663	140
Freight Handlers	5	.0	6	2

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

STATEWIDE (CONTD.)

	Estimated 1982 Employment	Percent of Total 1982 Employment	Projected 1986 Employment	Total Job Openings 1982-1986
Dispatchers, Police, Fire & Ambulance	8	.0	10	3
Manifest Clerks	8	.0	10	4
Rate Clerks, Freight	125	.2	144	47
Yard Clerks	36	.1	41	9
All Other Plant Clerical Workers	840	1.5	907	247
TOTAL SALES WORKERS	854	1.6	956	218
Sales Representatives, Agents &/or Associates	475	.9	516	101
Crating & Moving Estimators	77	.2	90	26
Traffic Agents	166	.3	196	53
All Other Sales Agents, Associates &/or Reps.	73	.1	86	25
Sales Clerks (Excl. Cashier)	63	.1	68	13
TOTAL ALL OCCUPATIONS	54,670	100.0	60,672	13,267

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
Nuclear Engineers

All Other Natural & Mathematical Scientists
Statisticians
Physical Scientists

All Other Professional Workers
Home Economists

TECHNICAL WORKERS

All Other Engineering Technicians
Sound Recording & Reproduction Technicians

All Other Technicians
Flight Engineers

SERVICE WORKERS

All Other Service Workers
Guides, Sightseeing or Establishment
Railroad Police

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
Body Repairers, Automotive
Refrigeration & Air Conditioning Mechanics

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

Car Repairers
Water Meter Installers

All Other Skilled Craft Workers
Boilermakers
Brakers, Train
Conductors, Train
Diesel Plant Operators
Electric Track Switch Maintainers
Firers, Locomotive
Gas-Compressor Operators
Hostlers
Locomotive Engineers
Sheet Metal Workers
Signal Maintainers
Tower Operators
Yard Engineers
Blacksmiths

All Other Operatives & Semiskilled Workers
Craters (Excl. Carpenters)
Locker Plant Attendants
Chauffeurs

CLERICAL WORKERS

All Other Office Clerical Workers
Claims Adjusters (Excl. Insurance Investigators)
Script Clerks

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

APACHE COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	62	67	5	9	14
TOTAL PROFESSIONAL WORKERS	56	61	5	4	9
Mechanical Engineers	5	5	0	0	0
All Other Engineers	17	19	2	1	3
All Natural & Mathematical Scientists	1	1	0	0	0
Accountants & Auditors	8	9	1	1	2
Personnel & Labor Relations Specialists	6	7	1	1	2
All Other Professional Workers	19	20	1	1	2
TOTAL TECHNICAL WORKERS	65	69	4	5	9
Drafters	9	10	1	1	2
All Other Engineering Technicians	38	40	2	2	4
All Other Technicians	18	19	1	2	3
TOTAL SERVICE WORKERS	31	33	2	3	5
Janitors, Porters & Cleaners	18	20	2	3	5
Guards & Doorkeepers	4	4	0	0	0
All Other Service Workers	9	9	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	1,129	1,224	95	121	216
Mechanics, Automotive	25	27	2	2	4
Mechanics, Maintenance (Excl. Millwrights)	45	49	4	4	8
Treatment Plant Mechanics	5	5	0	0	0
Gas & Electric Appliance Repairers	9	10	1	1	2
All Other Mechanics & Repairers	16	17	1	1	2
Truck Drivers	10	11	1	1	2
Truck Drivers, Heavy (Excl. Tractor-Trailer)	17	18	1	1	2
Tractor-Trailer Truck Drivers	13	14	1	1	2
Central Office Repairers	15	16	1	1	2
Control Room Operators, Steam	20	22	2	3	5
Electricians	48	52	4	5	9
Auxiliary Equipment Operators	45	49	4	6	10
Supervisors, Nonworking	81	88	7	9	16
Heavy Equipment Operators	22	24	2	2	4
Inspectors	7	8	1	1	2
Installers, Repairers &/or Section Maintainers	40	43	3	2	5
Instrument Repairers	9	10	1	1	2
Line Installers/Repairers	50	54	4	3	7
Maintenance Repairers, General Utility	55	59	4	5	9
Helpers, Trades	96	104	8	11	19
Plumbers &/or Pipefitters	8	9	1	1	2
Sewage Plant Operators	11	12	1	1	2
Station Installers	7	8	1	0	1
Stationary Engineers	30	32	2	3	5
Welders & Flamecutters	31	34	3	4	7
All Other Skilled Craft Workers	257	281	24	38	62
All Other Operatives & Semiskilled Workers	30	31	1	1	2
All Other Laborers & Unskilled Workers	127	137	10	13	23
TOTAL CLERICAL WORKERS	306	328	22	61	83
Computer Operators	5	5	0	1	1
Keypunch Operators	5	5	0	1	1
All Other Office Machine Operators	2	2	0	0	0
Accounting Clerks	34	37	3	7	10
Cashiers	6	7	1	1	2
General Clerks, Office	39	42	3	8	11
Secretaries	24	26	2	5	7
Clerical Supervisors, Office or Plant	21	23	2	3	5
Directory Assistance Operators	14	15	1	4	5
Central Office Operators	41	44	3	11	14
Customer Service Representatives	7	9	1	2	3
All Other Office Clerical Workers	55	57	2	11	13

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

APACHE COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
Stock Clerks, Stockroom, Warehouse or Storage	34	37	3	4	7
All Other Plant Clerical Workers	19	20	1	3	4
OTAL SALES WORKERS	4	4	0	0	0
All Sales Agents, Associates &/or Reps.	4	4	0	0	0
OTAL ALL OCCUPATIONS	1,653	1,786	133	203	336

:onfidential data for certain occupations, and data for occupations with employment of less than five, have been ıdded to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
Civil Engineers
Electrical & Electronic Engineers

All Other Professional Workers
Systems Analysts, Electronic Data Processing
Purchasing Agents &/or Buyers
Lawyers
Public Relations Practitioners
Right-of-Way Agents
Home Economists

TECHNICAL WORKERS

All Other Engineering Technicians
Computer Programmers
Surveyors (Excl. Surveyor Helpers)
Estimators & Drafters, Utilities
Electrical & Electronic Technicians

All Other Technicians
Science Technicians

SERVICE WORKERS

All Other Service Workers
Supervisors, Nonworking
Baggage Porters
Railroad Police

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
Diesel Mechanics (Excl. Auto & Eng. Equip.)
Car Repairers

All Other Skilled Craft Workers
Blacksmiths
Boilermakers
Brakers, Train
Cable Splicers
Carpenters (Excl. Cabinetmakers)
Conductors, Train
Electric Track Switch Maintainers
Firers, Locomotive
Hostlers
Locomotive Engineers
Machinists
Sheet Metal Workers
Signal Maintainers
Yard Engineers

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

All Other Operatives & Semiskilled Workers
Ballast Cleaning or Tamping Machine Operators
Cable Installers
Crane, Derrick & Hoist Operators
Frame Wirers
Substation Operators
Tower Operators
Surveyor Helpers

All Other Laborers & Unskilled Workers
Cleaners, Vehicle
Ground Workers, Utilities
Oilers
Painters, Maintenance (Excl. Production)
Refuse Collectors

CLERICAL WORKERS

All Other Office Machine Operators
Bookkeeping &/or Billing Machine Operators
Peripheral EDP Equipment Operators

All Other Office Clerical Workers
Stenographers
Adjustment Clerks
Collectors
File Clerks
Payroll &/or Timekeeping Clerks
Personnel Clerks
Private Branch Service Advisors
Receptionists
Statistical Clerks
Switchboard Operators
Switchboard Operators/Receptionists
Ticket Agents
Typists
Telegraph Operators
Station Agents

All Other Plant Clerical Workers
Shipping &/or Receiving Clerks
Dispatchers
Freight Handlers
Rate Clerks, Freight
Yard Clerks

SALES WORKERS

All Sales Agents, Associates &/or Reps.
Traffic Agents

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

COCHISE COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	111	120	9	16	25
TOTAL PROFESSIONAL WORKERS	139	149	10	11	21
Electrical & Electronic Engineers	46	50	4	3	7
All Other Engineers	13	14	1	1	2
All Natural & Mathematical Scientists	3	3	0	0	0
Purchasing Agents &/or Buyers	6	6	0	1	1
Accountants & Auditors	7	8	1	1	2
Announcers	22	24	2	2	4
All Other Professional Workers	42	44	2	3	5
TOTAL TECHNICAL WORKERS	104	111	7	9	16
Computer Programmers	9	10	1	0	1
Drafters	11	12	1	1	2
Electrical & Electronic Technicians	50	54	4	3	7
Estimators & Drafters, Utilities	6	6	0	0	0
All Other Engineering Technicians	12	13	1	1	2
All Science Technicians	2	2	0	0	0
All Medical & Dental Technicians	4	4	0	3	3
All Other Technicians	10	10	0	1	1
TOTAL SERVICE WORKERS	23	24	1	3	4
Janitors, Porters & Cleaners	12	13	1	2	3
Guards & Doorkeepers	4	4	0	0	0
Supervisors, Nonworking - Service	6	6	0	1	1
All Other Service Workers	1	1	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	743	796	53	63	116
Mechanics, Aircraft	44	47	3	3	6
Mechanics, Automotive	12	13	1	1	2
Mechanics, Maintenance (Excl. Millwrights)	22	24	2	2	4
Electronic Mechanics	19	20	1	1	2
All Other Mechanics & Repairers	27	28	1	3	4
Truck Drivers, Heavy (Excl. Tractor-Trailer)	26	28	2	2	4
Truck Drivers, Light (Excl. Delivery & Route)	6	6	0	0	0
Tractor-Trailer Truck Drivers	43	46	3	3	6
Electricians	17	18	1	2	3
Auxiliary Equipment Operators	34	37	3	5	8
Supervisors, Nonworking	37	40	3	4	7
Heavy Equipment Operators	10	11	1	1	2
Installers, Repairers &/or Section Maintainers	25	27	2	1	3
Line Installers/Repairers	74	80	6	4	10
Machinists	9	10	1	1	2
Maintenance Repairers, General Utility	20	22	2	2	4
Helpers, Trades	43	46	3	5	8
Substation Operators	19	21	2	2	4
Trouble Shooters, Power Line	11	12	1	1	2
Turbine Operators	10	11	1	1	2
Water Treatment Plant Operators	5	5	0	0	0
Welders & Flamecutters	9	10	1	1	2
Truck Driver Helpers	5	5	0	1	1
Line-Service Attendants	8	9	1	1	2
All Other Skilled Craft Workers	87	92	5	7	12
All Other Operatives & Semiskilled Workers	95	100	5	5	10
All Other Laborers & Unskilled Workers	26	28	2	4	6
TOTAL CLERICAL WORKERS	361	386	25	66	91
All Office Machine Operators	8	8	0	0	0
Accounting Clerks	14	15	1	3	4
Bookkeepers, Hand	6	6	0	1	1
Cashiers	15	16	1	3	4
File Clerks	6	6	0	2	2
General Clerks, Office	47	51	4	10	14

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

COCHISE COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
Secretaries	28	30	2	6	8
Typists	24	26	2	6	8
Clerical Supervisors, Office or Plant	7	8	1	1	2
Customer Service Representatives	31	34	3	7	10
All Other Office Clerical Workers	71	75	4	15	19
Meter Readers, Utilities	20	22	2	1	3
Shipping Packers	26	28	2	3	5
Shipping &/or Receiving Clerks	6	6	0	1	1
Stock Clerks, Stockroom, Warehouse or Storage	26	28	2	3	5
Dispatchers, Vehicle, Service or Work	15	16	1	2	3
All Other Plant Clerical Workers	11	11	0	2	2
TOTAL SALES WORKERS	18	19	1	2	3
Sales Representatives, Agents &/or Associates	18	19	1	2	3
TOTAL ALL OCCUPATIONS	1,499	1,605	106	170	276

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
- Civil Engineers

All Other Professional Workers
- Systems Analysts, Electronic Data Processing
- Broadcast News Analysts
- Writers &/or Editors
- Lawyers
- Librarians, Professional
- Personnel & Labor Relations Specialists
- Right-of-Way Agents
- Travel Agents &/or Accommodations Appraisers

TECHNICAL WORKERS

All Other Engineering Technicians
- Surveyors (Excl. Surveyor Helpers)
- Broadcast Technicians

All Medical & Dental Technicians
- Emergency Med. Techs. (Excl. Ambulance Attends.)

All Other Technicians
- Airplane Pilots
- Radio Operators

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Diesel Mechanics (Excl. Auto & Eng. Equip.)
- Electric Meter Installers & Removers
- Engineering Equipment Mechanics
- Radio Mechanics
- Car Repairers

All Other Skilled Craft Workers
- Brakers
- Cable Splicers
- Carpenters

MAINTENANCE & PRODUCTION WORKERS (CONTD.)
- Central Office Repairers
- Conductors, Train
- Firers
- Gas Pumping Station Operators
- Hostlers
- Instrument Repairers
- Locomotive Engineers
- Sheet Metal Workers
- Signal Maintainers
- Station Installers
- Trouble Locators
- Tower Operators
- Yard Engineers
- Painters, Aircraft

All Other Operatives & Semiskilled Workers
- Truck Drivers
- Ballast Cleaning & Tamping Machine Operators
- Cable Installers
- Cable Repairers
- Delivery & Route Workers
- Frame Wirers
- Industrial Truck Operators
- Inspectors
- Surveyor Helpers

All Other Laborers & Unskilled Workers
- Cleaners, Vehicle
- Ground Workers, Utilities
- Refuse Collectors

CLERICAL WORKERS

All Other Office Machine Operators
- Computer Operators
- Keypunch Operators
- Peripheral EDP Equipment Operators

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

COCHISE COUNTY (CONTD.)

CLERICAL WORKERS (CONTD.)

All Other Office Clerical Workers
- Stenographers
- Collectors
- Order Clerks
- Payroll &/or Timekeeping Clerks
- Personnel Clerks
- Receptionists
- Statistical Clerks
- Switchboard Operators/Receptionists
- Ticket Agents

CLERICAL WORKERS (CONTD.)

- Traffic Clerks
- Directory Assistance Operators
- Telegraph Operators
- Central Office Operators
- Station Agents

All Other Plant Clerical Workers
- Production Clerks &/or Coordinators
- Rate Clerks, Freight
- Yard Clerks

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

COCONINO COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	146	157	11	20	31
Managers & Officers	118	127	9	17	26
Pilots, Ship	16	17	1	1	2
All Other Managers	12	13	1	2	3
TOTAL PROFESSIONAL WORKERS	135	143	8	12	20
Electrical & Electronic Engineers	14	15	1	1	2
All Other Engineers	16	17	1	1	2
Natural & Mathematical Scientists	15	16	1	2	3
Systems Analysts, Electronic Data Processing	5	5	0	0	0
Accountants & Auditors	5	5	0	1	1
Announcers	36	39	3	3	6
Writers &/or Editors	7	8	1	1	2
Personnel & Labor Relations Specialists	6	6	0	1	1
Travel Agents &/or Accommodations Appraisers	17	18	1	2	3
All Other Professional Workers	14	14	0	0	0
TOTAL TECHNICAL WORKERS	122	131	9	28	37
Electrical & Electronic Technicians	11	12	1	1	2
Estimators & Drafters, Utilities	8	9	1	1	2
All Other Engineering Technicians	27	29	2	2	4
Airplane Pilots	25	27	2	1	3
All Medical & Dental Technicians	33	35	2	21	23
All Other Technicians	18	19	1	2	3
TOTAL SERVICE WORKERS	9	9	0	1	1
Janitors, Porters & Cleaners	6	6	0	1	1
All Other Service Workers	3	3	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	1,349	1,448	99	136	235
Mechanics, Automotive	18	19	1	1	2
Mechanics, Maintenance (Excl. Millwrights)	68	74	6	6	12
All Other Mechanics & Repairers	60	64	4	6	10
Truck Drivers	14	15	1	1	2
Truck Drivers, Heavy (Excl. Tractor-Trailer)	13	14	1	1	2
Tractor-Trailer Truck Drivers	59	63	4	4	8
Bus Drivers	106	113	7	14	21
Cable Installers	20	22	2	1	3
Cable Splicers	10	11	1	0	1
Control Room Operators, Steam	30	32	2	4	6
Corrosion Control Fitters	6	6	0	1	1
Electricians	41	44	3	4	7
Auxiliary Equipment Operators	42	45	3	6	9
Supervisors, Nonworking	93	101	8	10	18
Gas Pumping Station Operators	44	48	4	5	9
Heavy Equipment Operators	24	26	2	2	4
Inspectors	12	13	1	2	3
Instrument Repairers	23	25	2	2	4
Line Installers/Repairers	19	21	2	1	3
Machinists	23	25	2	2	4
Maintenance Repairers, General Utility	155	168	13	14	27
Helpers, Trades	22	24	2	2	4
Oilers	6	6	0	1	1
Painters, Maintenance (Excl. Production)	5	5	0	1	1
Station Installers	18	19	1	1	2
Stationary Engineers	10	11	1	1	2
Welders & Flamecutters	55	59	4	6	10
Truck Driver Helpers	20	21	1	2	3
Line-Service Attendants	17	18	1	2	3
Motorboat Operators	16	17	1	1	2
All Other Skilled Craft Workers	90	95	5	10	15
All Other Operatives & Semiskilled Workers	47	49	2	3	5
All Other Laborers & Unskilled Workers	163	175	12	19	31

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

COCONINO COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL CLERICAL WORKERS	363	387	24	66	90
All Office Machine Operators	6	6	0	1	1
Accounting Clerks	15	16	1	3	4
File Clerks	5	5	0	1	1
General Clerks, Office	63	68	5	14	19
Secretaries	20	22	2	5	7
Ticket Agents	48	51	3	6	9
Typists	8	9	1	2	3
Customer Service Representatives	35	38	3	8	11
All Other Office Clerical Workers	95	100	5	20	25
Meter Readers, Utilities	14	15	1	1	2
Stock Clerks, Stockroom, Warehouse or Storage	30	32	2	3	5
Dispatchers, Vehicle, Service or Work	8	9	1	1	2
All Other Plant Clerical Workers	16	16	0	1	1
TOTAL SALES WORKERS	18	19	1	2	3
Sales Representatives, Agents &/or Associates	18	19	1	2	3
TOTAL ALL OCCUPATIONS	2,142	2,294	152	265	417

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
- Civil Engineers
- Industrial Engineers
- Mechanical Engineers

All Other Professional Workers
- Photographers
- Purchasing Agents &/or Buyers
- Broadcast News Analysts
- Public Relations Practitioners
- Reporters &/or Correspondents
- Right-of-Way Agents
- Home Economists

TECHNICAL WORKERS

All Other Engineering Technicians
- Drafters
- Surveyors (Excl. Surveyor Helpers)
- Broadcast Technicians
- Computer Programmers

All Medical & Dental Technicians
- Emergency Med. Techs. (Excl. Ambulance Attends.)

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Mechanics, Aircraft
- Diesel Mechanics (Excl. Auto & Eng. Equip.)
- Electric Meter Installers & Removers
- Engineering Equipment Mechanics
- Radio Mechanics
- Car Repairers
- Gas & Electric Appliance Repairers

All Other Skilled Craft Workers
- Brakers, Train
- Carpenters (Excl. Cabinetmakers)

MAINTENANCE & PRODUCTION WORKERS (CONTD.)
- Central Office Repairers
- Conductors, Train
- Firers, Locomotive
- Gas-Compressor Operators
- Hostlers
- Installers, Repairers &/or Section Maintainers
- Locomotive Engineers
- Sheet Metal Workers
- Signal Maintainers
- Trouble Locators, Test Desk
- Tower Operators
- Yard Engineers

All Other Operatives & Semiskilled Workers
- Ballast Cleaning & Tamping Machine Operators
- Cable Repairers
- Crane, Derrick & Hoist Operators
- Delivery & Route Workers
- Frame Wirers
- Pipelayers
- Taxi Drivers
- Water Treatment Plant Operators
- Tire Changers
- Surveyor Helpers

All Other Laborers & Unskilled Workers
- Cleaners, Vehicle
- Ground Workers, Utilities

CLERICAL WORKERS

All Office Machine Operators
- Bookkeeping &/or Billing Machine Operators
- Computer Operators

All Other Office Clerical Workers
- Stenographers
- Reservation Agents
- Bookkeepers, Hand

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

COCONINO COUNTY (CONTD.)

CLERICAL WORKERS (CONTD.)

Adjustment Clerks
Cashiers
Collectors
Payroll &/or Timekeeping Clerks
Receptionists
Statistical Clerks
Switchboard Operators/Receptionists
Traffic Clerks
Clerical Supervisors, Office or Plant
Directory Assistance Operators
Telegraph Operators

CLERICAL WORKERS (CONTD.)

Central Office Operators
Station Agents

All Other Plant Clerical Workers
Production Clerks &/or Coordinators
Shipping &/or Receiving Clerks
Dispatchers, Airplane
Transportation Agents
Rate Clerks, Freight
Yard Clerks

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

GILA COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	28	30	2	4	6
TOTAL PROFESSIONAL WORKERS	11	11	0	0	0
Engineers (Incl. Sales Engineers)	3	3	0	0	0
All Other Professional Workers	8	8	0	0	0
TOTAL TECHNICAL WORKERS	8	8	0	0	0
Estimators & Drafters, Utilities	6	6	0	0	0
All Other Engineering Technicians	2	2	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	168	176	8	14	22
Hydroelectric Machine & Powerhouse Mechs.	16	17	1	1	2
All Other Mechanics & Repairers	15	15	0	0	0
Truck Drivers	9	10	1	1	2
Tractor-Trailer Truck Drivers	36	38	2	3	5
Supervisors, Nonworking	10	11	1	1	2
Line Installers/Repairers	9	10	1	1	2
Helpers, Trades	9	10	1	1	2
Trouble Shooters, Power Line	5	5	0	0	0
All Other Skilled Craft Workers	25	25	0	2	2
All Other Operatives & Semiskilled Workers	30	31	1	3	4
All Other Laborers & Unskilled Workers	4	4	0	1	1
TOTAL CLERICAL WORKERS	73	77	4	12	16
General Clerks, Office	13	14	1	3	4
Customer Service Representatives	17	18	1	4	5
All Other Office Clerical Workers	24	25	1	4	5
Meter Readers, Utilities	8	9	1	1	2
All Other Plant Clerical Workers	11	11	0	0	0
TOTAL SALES WORKERS	2	2	0	0	0
TOTAL ALL OCCUPATIONS	290	304	14	30	44

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Professional Workers
- Accountants & Auditors
- Right-of-Way Agents
- Announcers

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Mechanics, Automotive
- Diesel Mechanics (Excl. Auto & Eng. Equip.)
- Electric Meter Installers & Removers
- Gas Meter Installers
- Radio Mechanics

All Other Skilled Craft Workers
- Brakers, Train
- Bus Drivers
- Cable Splicers
- Central Office Repairers
- Maintenance Repairers, General Utility
- Sewage Plant Operators
- Station Installers
- Trouble Locators, Test Desk

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

All Other Operatives & Semiskilled Workers
- Cable Installers
- Cable Repairers
- Delivery & Route Workers
- Frame Wirers
- Pipelayers
- Welders & Flamecutters
- Surveyor Helpers
- Ambulance Drivers &/or Attendants

All Other Laborers & Unskilled Workers
- Ground Workers, Utilities

CLERICAL WORKERS

All Other Office Clerical Workers
- Bookkeeping &/or Billing Machine Operators
- Accounting Clerks
- Bookkeepers, Hand
- Collectors
- Secretaries
- Switchboard Operators/Receptionists
- Ticket Agents

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

GILA COUNTY (CONTD.)

CLERICAL WORKERS (CONTD.)

Clerical Supervisors, Office or Plant
Central Office Operators

All Other Plant Clerical Workers
Production Clerks &/or Coordinators

CLERICAL WORKERS (CONTD.)

Shipping &/or Receiving Clerks
Stock Clerks, Stockroom, Warehouse or Storage
Dispatchers, Vehicle, Service or Work
Yard Clerks

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

GRAHAM AND GREENLEE COUNTIES

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	22	24	2	3	5
TOTAL PROFESSIONAL WORKERS	17	18	1	1	2
TOTAL TECHNICAL WORKERS	8	9	1	0	1
TOTAL SERVICE WORKERS	3	3	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	99	102	3	5	8
All Mechanics & Repairers	8	8	0	0	0
Maintenance Repairers, General Utility	17	18	1	2	3
All Skilled Craft Workers	45	46	1	1	2
All Operatives & Semiskilled Workers	24	25	1	2	3
All Laborers & Unskilled Workers	5	5	0	0	0
TOTAL CLERICAL WORKERS	44	45	1	8	9
All Office Machine Operators	3	3	0	0	0
Accounting Clerks	5	5	0	1	1
General Clerks, Office	9	10	1	2	3
Meter Readers, Utilities	6	6	0	0	0
All Other Office Clerical Workers	18	18	0	5	5
All Other Plant Clerical Workers	3	3	0	0	0
TOTAL SALES WORKERS	3	3	0	0	0
TOTAL ALL OCCUPATIONS	196	204	8	17	25

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

- Accountants & Auditors
- Announcers
- Broadcast News Analysts

MAINTENANCE & PRODUCTION WORKERS

- All Skilled Craft Workers
  - Brakers
  - Cable Splicers
  - Conductors, Train
  - Corrosion Control Fitters
  - Supervisors, Nonworking
  - Installers, Repairers &/or Section Maintainers
  - Instrument Repairers
  - Line Installers/Repairers
  - Locomotive Engineers
  - Machinists
  - Plumbers &/or Pipefitters
  - Trouble Locators

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

- All Operatives & Semiskilled Workers
  - Truck Drivers
  - Truck Drivers, Heavy (Excl. Tractor-Trailer)
  - Tractor-Trailer Truck Drivers
  - Delivery & Route Workers
  - Heavy Equipment Operators
  - Welders & Flamecutters

CLERICAL WORKERS

- All Other Office Clerical Workers
  - Bookkeepers, Hand
  - Cashiers
  - Secretaries
  - Directory Assistance Operators
  - Central Office Operators
  - Customer Service Representatives

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

MARICOPA COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	2,717	3,075	358	393	751
TOTAL PROFESSIONAL WORKERS	2,864	3,201	337	311	648
Chemical Engineers	7	7	0	1	1
Civil Engineers	34	38	4	5	9
Electrical & Electronic Engineers	623	667	44	37	81
Industrial Engineers	10	11	1	1	2
Mechanical Engineers	75	81	6	5	11
All Other Engineers	102	109	7	7	14
All Natural & Mathematical Scientists	25	27	2	3	5
Systems Analysts, Electronic Data Processing	100	108	8	4	12
All Teachers	12	15	3	2	5
Photographers	51	55	4	5	9
Television Camera Operators	40	43	3	3	6
Purchasing Agents &/or Buyers	40	45	5	5	10
Accountants & Auditors	186	206	20	28	48
Announcers	219	234	15	15	30
Broadcast News Analysts	69	74	5	5	10
Commercial Artists	13	14	1	2	3
Writers &/or Editors	45	48	3	8	11
Film Editors	18	19	1	3	4
Lawyers	25	27	2	3	5
Librarians, Professional	5	5	0	1	1
Personnel & Labor Relations Specialists	122	133	11	14	25
Public Relations Practitioners	6	6	0	1	1
Reporters &/or Correspondents	87	93	6	15	21
Right-of-Way Agents	29	31	2	4	6
Technical Directors	13	14	1	1	2
Travel Agents &/or Accommodations Appraisers	747	908	161	110	271
All Other Professional Workers	161	183	22	23	45
TOTAL TECHNICAL WORKERS	1,482	1,649	167	154	321
Computer Programmers	138	153	15	7	22
Drafters	130	139	9	11	20
Electrical & Electronic Technicians	226	242	16	13	29
Surveyors (Excl. Surveyor Helpers)	14	15	1	1	2
Mechanical Engineering Technicians	6	6	0	0	0
Broadcast Technicians	106	113	7	6	13
Estimators & Drafters, Utilities	118	126	8	10	18
All Other Engineering Technicians	237	253	16	24	40
Airplane Pilots	286	348	62	16	78
All Medical & Dental Technicians	78	95	17	51	68
All Other Technicians	143	159	16	15	31
TOTAL SERVICE WORKERS	723	867	144	141	285
Janitors, Porters & Cleaners	105	122	17	19	36
Guards & Doorkeepers	47	55	8	3	11
Food Service Workers (Exclude Cashiers)	29	31	2	5	7
Flight Attendants	320	389	69	95	164
Supervisors, Nonworking - Service	28	34	6	3	9
Baggage Porters	169	206	37	12	49
All Other Service Workers	25	30	5	4	9
TOTAL MAINTENANCE & PRODUCTION WORKERS	15,229	17,609	2,380	1,395	3,775
Mechanics, Aircraft	286	348	62	17	79
Mechanics, Automotive	238	277	39	20	59
Diesel Mechanics (Excl. Auto & Eng. Equip.)	363	433	70	32	102
Electrical Instrument Repairers	96	103	7	9	16
Electric Meter Installers & Removers	44	47	3	2	5
Gas Meter Installers	8	9	1	0	1
Hydroelectric Machine & Powerhouse Mechs.	8	9	1	1	2
Mechanics, Maintenance (Excl. Millwrights)	71	78	7	7	14
Power-Transformer Repairers	153	164	11	14	25

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

MARICOPA COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
Radio Mechanics	201	217	16	13	29
Treatment Plant Mechanics	84	90	6	8	14
All Other Mechanics & Repairers	125	151	26	16	42
Truck Drivers	314	346	32	23	55
Truck Drivers, Heavy (Excl. Tractor-Trailer)	761	925	164	58	222
Truck Drivers, Light (Excl. Delivery & Route)	167	203	36	13	49
Tractor-Trailer Truck Drivers	2,291	2,785	494	174	668
Bus Drivers	830	1,009	179	111	290
Cable Installers	174	186	12	6	18
Cable Repairers	113	121	8	6	14
Cable Splicers	216	231	15	8	23
Carpenters (Excl. Cabinetmakers)	24	28	4	3	7
Central Office Repairers	363	388	25	30	55
Cleaners, Vehicle	153	184	31	8	39
Control Room Operators, Steam	30	32	2	4	6
Corrosion Control Fitters	5	5	0	1	1
Crane, Derrick & Hoist Operators	27	29	2	3	5
Delivery & Route Workers	790	960	170	56	226
Electricians	182	198	16	18	34
Auxiliary Equipment Operators	34	36	2	5	7
Supervisors, Nonworking	981	1,099	118	110	228
Frame Wirers	156	167	11	9	20
Ground Workers, Utilities	82	88	6	16	22
Heavy Equipment Operators	125	135	10	11	21
Industrial Truck Operators	77	93	16	6	22
Inspectors	80	86	6	12	18
Installers, Repairers &/or Section Maintainers	287	307	20	16	36
Instrument Repairers	50	54	4	5	9
Line Installers/Repairers	335	358	23	19	42
Machinists	191	219	28	20	48
Maintenance Repairers, General Utility	417	478	61	39	100
Helpers, Trades	235	260	25	27	52
Painters, Maintenance (Excl. Production)	31	33	2	4	6
Plumbers &/or Pipefitters	8	9	1	1	2
Power Reactor Operators	36	39	3	3	6
Station Installers	313	335	22	17	39
Stationary Boiler Firers	7	7	0	1	1
Stationary Engineers	24	26	2	3	5
Taxi Drivers	123	150	27	18	45
Trouble Locators, Test Desk	194	208	14	25	39
Trouble Shooters, Power Line	64	68	4	5	9
Turbine Operators	23	25	2	3	5
Water Treatment Plant Operators	9	10	1	1	2
Pump Station Operators, Waterworks	114	122	8	10	18
Welders & Flamecutters	85	96	11	10	21
Fuel Pump Attendants &/or Lubricators	18	22	4	2	6
Tire Changers	14	17	3	2	5
Surveyor Helpers	17	18	1	2	3
Dispatchers, Load	15	16	1	1	2
Truck Driver Helpers	350	426	76	41	117
Line-Service Attendants	470	572	102	55	157
All Other Skilled Craft Workers	499	586	87	55	142
All Other Operatives & Semiskilled Workers	593	649	56	67	123
All Other Laborers & Unskilled Workers	1,055	1,239	184	113	297
TOTAL CLERICAL WORKERS	11,072	12,313	1,241	2,179	3,420
Bookkeeping &/or Billing Machine Operators	84	95	11	16	27
Computer Operators	61	67	6	7	13
Keypunch Operators	110	120	10	24	34
Peripheral EDP Equipment Operators	85	93	8	20	28
All Other Office Machine Operators	58	62	4	16	20
Stenographers	69	76	7	15	22
Accounting Clerks	480	546	66	96	162

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

MARICOPA COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
Reservation Agents	120	146	26	16	42
Bookkeepers, Hand	103	120	17	21	38
Adjustment Clerks	152	167	15	33	48
Cashiers	102	115	13	21	34
Collectors	46	49	3	7	10
File Clerks	84	91	7	23	30
General Clerks, Office	1,140	1,279	139	248	387
Information Clerks	67	81	14	18	32
Order Clerks	21	23	2	4	6
Payroll &/or Timekeeping Clerks	55	64	9	10	19
Personnel Clerks	45	49	4	12	16
Receptionists	34	39	5	9	14
Secretaries	522	583	61	121	182
Statistical Clerks	266	285	19	57	76
Switchboard Operators	297	338	41	81	122
Switchboard Operators/Receptionists	47	54	7	13	20
Ticket Agents	557	678	121	76	197
Traffic Clerks	55	59	4	12	16
Typists	389	420	31	100	131
Clerical Supervisors, Office or Plant	390	432	42	48	90
Directory Assistance Operators	399	427	28	107	135
Central Office Operators	422	452	30	113	143
Customer Service Representatives	1,030	1,102	72	221	293
All Other Office Clerical Workers	1,075	1,168	93	230	323
Meter Readers, Utilities	279	299	20	19	39
Production Clerks &/or Coordinators	137	147	10	15	25
Shipping Packers	131	159	28	15	43
Shipping &/or Receiving Clerks	316	348	32	28	60
Stock Clerks, Stockroom, Warehouse or Storage	316	358	42	36	78
Dispatchers, Airplane	17	21	4	1	5
Transportation Agents	164	199	35	22	57
Dispatchers, Vehicle, Service or Work	419	483	64	49	113
Rate Clerks, Freight	76	93	17	17	34
All Other Plant Clerical Workers	852	926	74	182	256
TOTAL SALES WORKERS	559	641	82	78	160
Sales Representatives, Agents &/or Associates	248	270	22	32	54
Crating & Moving Estimators	63	77	14	11	25
Traffic Agents	133	162	29	18	47
All Other Sales Agents, Associates &/or Reps.	57	69	12	10	22
Sales Clerks (Excl. Cashier)	58	63	5	7	12
TOTAL ALL OCCUPATIONS	34,646	39,355	4,709	4,651	9,360

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
Nuclear Engineers

All Natural & Mathematical Scientists
Statisticians
Physical Scientists

All Other Teachers
Teachers, Vocational Education or Training

TECHNICAL WORKERS

All Other Engineering Technicians
Sound Recording & Reproduction Technicians
Video Recording Engineers

TECHNICAL WORKERS (CONTD.)

All Medical & Dental Technicians
Emergency Med. Techs. (Excl. Ambulance Attends.)

All Other Technicians
Flight Engineers
Radio Operators

SERVICE WORKERS

All Other Service Workers
Guides, Travel (Excl. Estab. or Sightseeing Guides)
Guides, Sightseeing or Establishment
Railroad Police

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

MARICOPA COUNTY (CONTD.)

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Body Repairers, Automotive
- Engineering Equipment Mechanics
- Refrigeration/Air Conditioning Mechanics
- Car Repairers
- Electronic Mechanics
- Water Meter Installers

All Other Skilled Craft Workers
- Blacksmiths
- Boilermakers
- Brakers, Train
- Conductors, Train
- Electric-Track Switch Maintainers
- Firers, Locomotive
- Hostlers
- Locomotive Engineers
- Painters, Automotive
- Sewage Plant Operators
- Sheet Metal Workers
- Signal Maintainers
- Substation Operators
- Tower Operators
- Yard Engineers
- Painters, Aircraft

All Other Operatives & Semiskilled Workers
- Ballast Cleaning or Tamping Machine Operators
- Craters (Excl. Carpenters)

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

- Tire Fabricators &/or Repairers
- Locker Plant Attendants
- Chauffeurs
- Ambulance Drivers &/or Attendants

All Other Laborers & Unskilled Workers
- Baggage Handlers
- Oilers
- Refuse Collectors
- Tree Trimmers

CLERICAL WORKERS

All Other Office Clerical Workers
- Claims Adjusters (Excl. Ins. Investigators)
- Private Branch Service Advisors
- Telegraph Operators
- Station Agents

All Other Plant Clerical Workers
- Meter Readers, Taxi or Bus
- Freight Handlers
- Dispatchers, Police, Fire & Ambulance
- Manifest Clerks
- Yard Clerks

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

MOHAVE COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	43	46	3	6	9
TOTAL PROFESSIONAL WORKERS	47	50	3	5	8
All Engineers	3	3	0	0	0
Announcers	9	10	1	1	2
All Other Professional Workers	35	37	2	4	6
TOTAL TECHNICAL WORKERS	21	23	2	2	4
Electrical & Electronic Technicians	9	10	1	1	2
All Engineering Technicians	2	2	0	0	0
All Other Technicians	10	11	1	1	2
TOTAL SERVICE WORKERS	2	2	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	321	343	22	25	47
Mechanics, Aircraft	12	13	1	1	2
All Other Mechanics & Repairers	22	24	2	1	3
Tractor-Trailer Truck Drivers	84	90	6	6	12
Supervisors, Nonworking	23	25	2	3	5
Ground Workers, Utilities	17	18	1	3	4
Instrument Repairers	5	5	0	0	0
Line Installers/Repairers	24	26	2	1	3
Maintenance Repairers, General Utility	11	12	1	1	2
Helpers, Trades	5	5	0	1	1
Water Treatment Plant Operators	7	8	1	1	2
All Other Skilled Craft Workers	55	58	3	4	7
All Other Operatives & Semiskilled Workers	36	37	1	2	3
All Other Laborers & Unskilled Workers	20	22	2	1	3
TOTAL CLERICAL WORKERS	133	140	7	22	29
Bookkeeping &/or Billing Machine Operators	5	5	0	1	1
Accounting Clerks	6	6	0	1	1
Cashiers	13	14	1	3	4
General Clerks, Office	33	36	3	7	10
Secretaries	15	16	1	3	4
All Other Office Clerical Workers	36	37	1	5	6
Meter Readers, Utilities	17	18	1	1	2
Stock Clerks, Stockroom, Warehouse or Storage	6	6	0	1	1
All Other Plant Clerical Workers	2	2	0	0	0
TOTAL SALES WORKERS	8	9	1	1	2
All Sales Agents, Associates &/or Reps.	8	9	1	1	2
TOTAL ALL OCCUPATIONS	575	613	38	61	99

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Professional Workers
- Purchasing Agents &/or Buyers
- Accountants & Auditors
- Broadcast News Analysts
- Writers &/or Editors
- Travel Agents &/or Accommodations Appraisers

TECHNICAL WORKERS

All Other Technicians
- Airplane Pilots

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Diesel Mechanics (Excl. Auto & Eng. Equip.)
- Gas Meter Installers
- Mechanics, Maintenance (Excl. Millwrights)
- Car Repairers
- Gas & Electric Appliance Repairers
- Electric Meter Installers & Removers

All Other Skilled Craft Workers
- Brakers, Train
- Cable Splicers

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

MOHAVE COUNTY (CONTD.)

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

Carpenters (Excl. Cabinetmakers)
Central Office Repairers
Conductors, Train
Corrosion Control Fitters
Electricians
Firers, Locomotive
Installers, Repairers &/or Section Maintainers
Locomotive Engineers
Machinists
Sewage Plant Operators
Sheet Metal Workers
Signal Maintainers
Stationary Engineers
Substation Operators
Trouble Shooters, Power Line
Yard Engineers

All Other Operatives & Semiskilled Workers
Truck Drivers
Truck Drivers, Light (Excl. Delivery & Route)
Ballast Cleaning &/or Tamping Machine Operators
Delivery & Route Workers
Heavy Equipment Operators

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

Welders & Flamecutters
Ambulance Drivers &/or Attendants
Motorboat Operators

All Other Laborers & Unskilled Workers
Refuse Collectors

CLERICAL WORKERS

All Other Office Clerical Workers
Stenographers
Bookkeepers, Hand
Adjustment Clerks
Receptionists
Switchboard Operators
Traffic Clerks
Typists
Clerical Supervisors, Office or Plant
Telegraph Operators
Central Office Operators
Station Agents
Customer Service Representatives
Reservation Agents
Ticket Agents

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

NAVAJO COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	101	108	7	14	21
TOTAL PROFESSIONAL WORKERS	56	60	4	4	8
Electrical & Electronic Engineers	5	5	0	0	0
All Other Engineers	16	18	2	1	3
Natural & Mathematical Scientists	2	2	0	0	0
Announcers	11	12	1	1	2
Personnel & Labor Relations Specialists	5	5	0	1	1
All Other Professional Workers	17	18	1	1	2
TOTAL TECHNICAL WORKERS	44	46	2	3	5
Drafters	5	5	0	0	0
Estimators & Drafters, Utilities	6	6	0	0	0
All Other Engineering Technicians	20	21	1	2	3
All Other Technicians	13	14	1	1	2
TOTAL SERVICE WORKERS	34	36	2	5	7
Janitors, Porters & Cleaners	28	30	2	5	7
Food Service Workers (Exclude Cashiers)	1	1	0	0	0
All Other Service Workers	5	5	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	1,116	1,186	70	122	192
Mechanics, Automotive	6	6	0	0	0
Diesel Mechanics (Excl. Auto & Eng. Equip.)	10	11	1	1	2
Mechanics, Maintenance (Excl. Millwrights)	11	12	1	1	2
All Other Mechanics & Repairers	69	72	3	9	12
Tractor-Trailer Truck Drivers	36	38	2	3	5
Auxiliary Equipment Operators	45	49	4	6	10
Supervisors, Nonworking	61	66	5	7	12
Ground Workers, Utilities	7	8	1	1	2
Installers, Repairers &/or Section Maintainers	12	13	1	1	2
Instrument Repairers	18	19	1	2	3
Line Installers/Repairers	34	37	3	2	5
Maintenance Repairers, General Utility	21	23	2	2	4
Helpers, Trades	51	55	4	6	10
Station Engineers, Main Line	6	6	0	1	1
Turbine Operators	19	21	2	3	5
Welders & Flamecutters	28	30	2	3	5
Pipeliners	6	6	0	1	1
All Other Skilled Craft Workers	383	403	20	46	66
All Other Operatives & Semiskilled Workers	117	125	8	9	17
All Other Laborers & Unskilled Workers	176	186	10	18	28
TOTAL CLERICAL WORKERS	371	399	28	73	101
All Office Machine Operators	11	11	0	2	2
Accounting Clerks	11	12	1	2	3
Cashiers	7	8	1	1	2
General Clerks, Office	63	67	4	14	18
Secretaries	14	15	1	3	4
Clerical Supervisors, Office or Plant	23	25	2	3	5
Central Office Operators	62	67	5	17	22
Customer Service Representatives	30	32	2	6	8
All Other Office Clerical Workers	84	90	6	17	23
Meter Readers, Utilities	12	13	1	1	2
Shipping &/or Receiving Clerks	7	8	1	1	2
Stock Clerks, Stockroom, Warehouse or Storage	20	22	2	2	4
All Other Plant Clerical Workers	27	29	2	4	6
TOTAL SALES WORKERS	12	13	1	1	2
All Sales Representatives, Agents &/or Associates	11	12	1	1	2
All Other Sales Workers	1	1	0	0	0
TOTAL ALL OCCUPATIONS	1,734	1,848	114	222	336

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

NAVAJO COUNTY (CONTD.)

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
- Civil Engineers
- Industrial Engineers
- Mechanical Engineers

All Other Professional Workers
- Systems Analysts, Electronic Data Processing
- Purchasing Agents &/or Buyers
- Accountants & Auditors
- Lawyers
- Right-of-Way Agents

TECHNICAL WORKERS

All Other Technicians
- Airplane Pilots

All Other Engineering Technicians
- Computer Programmers
- Electrical & Electronic Technicians
- Surveyors (Excl. Surveyor Helpers)

SERVICE WORKERS

All Other Service Workers
- Baggage Porters
- Railroad Police

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Mechanics, Aircraft
- Electric Meter Installers & Removers
- Gas Meter Installers
- Engineering Equipment Mechanics
- Radio Mechanics
- Car Repairers
- Gas & Electric Appliance Repairers

All Other Skilled Craft Workers
- Blacksmiths
- Boilermakers
- Brakers, Train
- Cable Splicers
- Carpenters (Excl. Cabinetmakers)
- Central Office Repairers
- Conductors, Train
- Electric-Track Switch Maintainers
- Electricians
- Firers, Locomotive
- Hostlers
- Locomotive Engineers
- Machinists
- Plumbers &/or Pipefitters
- Sheet Metal Workers
- Signal Maintainers
- Station Installers
- Stationary Engineers
- Substation Operators
- Trouble Locators, Test Desk
- Tower Operators
- Yard Engineers

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

All Other Operatives & Semiskilled Workers
- Truck Drivers
- Ballast Cleaning &/or Tamping Machine Operators
- Cable Installers
- Cable Repairers
- Crane, Derrick & Hoist Operators
- Delivery & Route Workers
- Frame Wirers
- Heavy Equipment Operators
- Industrial Truck Operators
- Inspectors
- Water Treatment Plant Operators
- Surveyor Helpers
- Ambulance Drivers &/or Attendants

All Other Laborers & Unskilled Workers
- Baggage Handlers
- Cleaners, Vehicle
- Oilers
- Painters, Maintenance (Excl. Production)
- Refuse Collectors
- Tree Trimmers

CLERICAL WORKERS

All Other Office Machine Operators
- Bookkeeping &/or Billing Machine Operators
- Computer Operators
- Keypunch Operators
- Peripheral EDP Equipment Operators

All Other Office Clerical Workers
- Stenographers
- Bookkeepers, Hand
- Adjustment Clerks
- Collectors
- File Clerks
- Order Clerks
- Payroll &/or Timekeeping Clerks
- Personnel Clerks
- Private Branch Service Advisors
- Receptionists
- Statistical Clerks
- Switchboard Operators
- Switchboard Operators-Receptionists
- Ticket Agents
- Typists
- Directory Assistance Operators
- Telegraph Operators
- Station Agents

All Other Plant Clerical Workers
- Production Clerks &/or Coordinators
- Dispatchers, Vehicle, Service or Work
- Freight Handlers
- Rate Clerks, Freight
- Yard Clerks

SALES WORKERS

All Sales Representatives, Agents &/or Associates
- Traffic Agents

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

PIMA COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	564	591	27	80	107
Managers & Officers	563	590	27	80	107
All Other Managers	1	1	0	0	0
TOTAL PROFESSIONAL WORKERS	962	1,015	59	101	160
Electrical & Electronic Engineers	175	190	15	10	25
Mechanical Engineers	21	23	2	1	3
All Other Engineers	58	63	5	5	10
Natural & Mathematical Scientists	7	7	0	1	1
Systems Analysts, Electronic Data Processing	49	53	4	2	6
All Teachers	1	1	0	0	0
Photographers	13	14	1	1	2
Television Camera Operators	29	31	2	2	4
Purchasing Agents &/or Buyers	13	14	1	2	3
Accountants & Auditors	49	52	3	7	10
Announcers	86	93	7	6	13
Broadcast News Analysts	34	37	3	2	5
Commercial Artists	9	10	1	2	3
Writers &/or Editors	39	42	3	7	10
Film Editors	11	12	1	2	3
Librarians, Professional	6	6	0	1	1
Personnel & Labor Relations Specialists	32	35	3	4	7
Reporters &/or Correspondents	28	30	2	5	7
Right-of-Way Agents	7	8	1	1	2
Technical Directors	24	26	2	1	3
Travel Agents &/or Accommodations Appraisers	242	236	0	34	34
All Other Professional Workers	29	32	3	5	8
TOTAL TECHNICAL WORKERS	258	275	18	17	35
Computer Programmers	21	23	2	1	3
Drafters	22	24	2	2	4
Electrical & Electronic Technicians	76	82	6	4	10
Broadcast Technicians	40	43	3	2	5
All Other Engineering Technicians	61	65	4	6	10
Airplane Pilots	25	24	0	1	1
All Other Technicians	13	14	1	1	2
TOTAL SERVICE WORKERS	89	95	6	13	19
Janitors, Porters & Cleaners	30	32	2	5	7
Guards & Doorkeepers	13	14	1	1	2
Food Service Workers (Exclude Cashiers)	3	3	0	0	0
All Other Service Workers	43	46	3	7	10
TOTAL MAINTENANCE & PRODUCTION WORKERS	3,963	4,116	183	392	575
Mechanics, Aircraft	96	94	0	5	5
Mechanics, Automotive	65	68	3	5	8
Diesel Mechanics (Excl. Auto & Eng. Equip.)	87	87	0	7	7
Electrical Instrument Repairers	17	18	1	2	3
Electric Meter Installers & Removers	10	11	1	1	2
Engineering Equipment Mechanics	14	15	1	1	2
Mechanics, Maintenance (Excl. Millwrights)	20	22	2	2	4
Radio Mechanics	95	103	8	6	14
Gas & Electric Appliance Repairers	50	54	4	6	10
All Other Mechanics & Repairers	122	132	10	18	28
Truck Drivers	32	33	1	2	3
Truck Drivers, Heavy (Excl. Tractor-Trailer)	135	132	0	10	10
Truck Drivers, Light (Excl. Delivery & Route)	28	27	0	2	2
Tractor-Trailer Truck Drivers	206	201	0	15	15
Bus Drivers	478	467	0	60	60
Cable Installers	42	45	3	2	5
Cable Repairers	57	62	5	3	8
Cable Splicers	54	58	4	2	6

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

PIMA COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
Carpenters (Excl. Cabinetmakers)	13	15	2	2	4
Central Office Repairers	101	109	8	8	16
Cleaners, Vehicle	30	31	1	2	3
Corrosion Control Fitters	7	8	1	1	2
Crane, Derrick & Hoist Operators	13	14	1	1	2
Delivery & Route Workers	117	114	0	8	8
Electricians	73	79	6	7	13
Auxiliary Equipment Operators	7	8	1	1	2
Supervisors, Nonworking	316	337	21	35	56
Frame Wirers	50	54	4	3	7
Gas Pumping Station Operators	21	23	2	2	4
Ground Workers, Utilities	27	29	2	5	7
Heavy Equipment Operators	18	20	2	2	4
Industrial Truck Operators	16	17	1	1	2
Inspectors	9	10	1	1	2
Installers, Repairers &/or Section Maintainers	53	57	4	3	7
Instrument Repairers	32	35	3	3	6
Line Installers/Repairers	136	147	11	8	19
Maintenance Repairers, General Utility	19	20	1	2	3
Helpers, Trades	68	71	3	8	11
Oilers	7	7	0	1	1
Plumbers &/or Pipefitters	9	10	1	1	2
Station Installers	107	116	9	6	15
Substation Operators	8	9	1	1	2
Switchboard Operators, Generating Plant	11	12	1	1	2
Trouble Shooters, Power Line	13	14	1	1	2
Turbine Operators	12	13	1	2	3
Welders & Flamecutters	31	34	3	4	7
Fuel Pump Attendants &/or Lubricators	21	20	0	2	2
Tire Changers	7	7	0	1	1
Surveyor Helpers	5	5	0	1	1
Truck Driver Helpers	67	65	0	7	7
Line-Service Attendants	50	49	0	6	6
All Other Skilled Craft Workers	357	388	31	47	78
All Other Operatives & Semiskilled Workers	231	234	3	29	32
All Other Laborers & Unskilled Workers	293	306	14	30	44
TOTAL CLERICAL WORKERS	2,736	2,908	175	533	708
Bookkeeping &/or Billing Machine Operators	45	48	3	8	11
Computer Operators	18	19	1	2	3
Keypunch Operators	22	24	2	5	7
Peripheral EDP Equipment Operators	5	6	1	1	2
All Other Office Machine Operators	5	5	0	1	1
Stenographers	45	49	4	10	14
Accounting Clerks	113	120	7	22	29
Bookkeepers, Hand	37	37	0	7	7
Adjustment Clerks	23	25	2	5	7
Cashiers	25	26	1	5	6
Collectors	17	18	1	3	4
File Clerks	43	47	4	12	16
General Clerks, Office	367	388	21	79	100
Order Clerks	7	7	0	1	1
Payroll &/or Timekeeping Clerks	23	25	2	4	6
Receptionists	13	13	0	3	3
Secretaries	95	100	5	22	27
Statistical Clerks	81	88	7	18	25
Switchboard Operators	14	15	1	4	5
Switchboard Operators/Receptionists	16	17	1	4	5
Ticket Agents	126	125	0	16	16
Traffic Clerks	21	23	2	5	7
Typists	93	101	8	24	32
Clerical Supervisors, Office or Plant	121	130	9	15	24
Directory Assistance Operators	102	110	8	27	35

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

PIMA COUNTY (CONTD.)

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
Central Office Operators	204	221	17	55	72
Customer Service Representatives	229	248	19	49	68
All Other Office Clerical Workers	360	387	27	75	102
Meter Readers, Utilities	70	76	6	5	11
Production Clerks &/or Coordinators	67	73	6	7	13
Shipping Packers	7	7	0	1	1
Shipping &/or Receiving Clerks	16	17	1	1	2
Stock Clerks, Stockroom, Warehouse or Storage	77	81	4	9	13
Transportation Agents	65	63	0	8	8
Dispatchers, Vehicle, Service or Work	121	123	2	14	16
Rate Clerks, Freight	18	18	0	4	4
All Other Plant Clerical Workers	25	28	3	2	5
TOTAL SALES WORKERS	154	163	9	21	30
Sales Representatives, Agents &/or Associates	106	115	9	14	23
Crating & Moving Estimators	14	14	0	2	2
Traffic Agents	16	16	0	2	2
All Other Sales Agents, Associates &/or Reps.	14	14	0	2	2
All Other Sales Workers	4	4	0	1	1
TOTAL ALL OCCUPATIONS	8,726	9,163	477	1,157	1,634

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Other Engineers
- Chemical Engineers
- Civil Engineers
- Industrial Engineers

All Other Professional Workers
- Lawyers
- Public Relations Practitioners

TECHNICAL WORKERS

All Other Engineering Technicians
- Surveyors (Excl. Surveyor Helpers)
- Video Recording Engineers

SERVICE WORKERS

All Other Service Workers
- Flight Attendants
- Supervisors, Nonworking - Service
- Guides, Travel (Excl. Estab. or Sightseeing)
- Baggage Porters
- Guides, Sightseeing or Establishment
- Railroad Police

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
- Body Repairers, Automotive
- Hydroelectric Machine & Powerhouse Mechs.
- Power-Transformer Repairers
- Car Repairers
- Electronic Mechanics
- Water Meter Installers

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

All Other Skilled Craft Workers
- Blacksmiths
- Boilermakers
- Brakers, Train
- Conductors, Train
- Electric-Track Switch Maintainers
- Firers, Locomotive
- Hostlers
- Locomotive Engineers
- Machinists
- Painters, Automotive
- Sheet Metal Workers
- Signal Maintainers
- Stationary Engineers
- Trouble Locators, Test Desk
- Tower Operators
- Yard Engineers
- Bus Drivers, School

All Other Operatives & Unskilled Workers
- Ballast Cleaning &/or Tamping Machine Operators
- Pipelayers
- Stationary Boiler Firers
- Taxi Drivers
- Tire Fabricators &/or Repairers
- Ambulance Drivers &/or Attendants

All Other Laborers & Unskilled Workers
- Refuse Collectors
- Baggage Handlers
- Painters, Maintenance (Excl. Production Painters)

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

PIMA COUNTY (CONTD.)

CLERICAL WORKERS

All Other Office Clerical Workers
Reservation Agents
Claims Adjusters (Excl. Ins. Investigators)
Information Clerks
Personnel Clerks
Private Branch Service Advisors
Script Clerks
Telegraph Operators
Station Agents

CLERICAL WORKERS (CONTD.)

All Other Plant Clerical Workers
Dispatchers, Airplane
Freight Handlers
Yard Clerks

SALES WORKERS

All Other Sales Workers
Sales Clerks (Excl. Cashier)

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

PINAL COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	59	64	5	8	13
TOTAL PROFESSIONAL WORKERS	52	54	2	5	7
All Engineers (Incl. Sales Engineers)	10	10	0	0	0
Purchasing Agents &/or Buyers	7	7	0	1	1
Announcers	12	13	1	1	2
All Other Professional Workers	23	24	1	3	4
TOTAL TECHNICAL WORKERS	24	26	2	2	4
Electrical & Electronic Technicians	11	12	1	1	2
Estimators & Drafters, Utilities	7	8	1	1	2
All Other Engineering Technicians	3	3	0	0	0
All Other Technicians	3	3	0	0	0
TOTAL SERVICE WORKERS	25	26	1	3	4
Janitors, Porters & Cleaners	12	13	1	2	3
Guards & Doorkeepers	7	7	0	0	0
All Food Service Workers (Exclude Cashiers)	4	4	0	1	1
All Other Service Workers	2	2	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	594	634	40	50	90
Mechanics, Aircraft	95	101	6	6	12
Hydroelectric Machine & Powerhouse Mechs.	13	14	1	1	2
Radio Mechanics	16	17	1	1	2
Gas & Electric Appliance Repairers	12	13	1	1	2
All Other Mechanics & Repairers	21	22	1	2	3
Truck Drivers	5	5	0	0	0
Cleaners, Vehicle	7	7	0	0	0
Electricians	13	14	1	1	2
Supervisors, Nonworking	26	28	2	3	5
Industrial Truck Operators	17	18	1	1	2
Installers, Repairers &/or Section Maintainers	12	13	1	1	2
Instrument Repairers	7	8	1	1	2
Line Installers/Repairers	8	9	1	0	1
Machinists	10	11	1	1	2
Helpers, Trades	14	15	1	2	3
Welders & Flamecutters	13	14	1	1	2
Painters, Aircraft	10	11	1	1	2
All Other Skilled Craft Workers	101	107	6	9	15
All Other Operatives & Semiskilled Workers	116	123	7	9	16
All Other Laborers & Unskilled Workers	78	84	6	9	15
TOTAL CLERICAL WORKERS	177	189	12	31	43
All Office Machine Operators	3	3	0	0	0
General Clerks, Office	45	49	4	10	14
Secretaries	13	14	1	3	4
Customer Service Representatives	37	40	3	8	11
All Other Office Clerical Workers	40	41	1	6	7
Meter Readers, Utilities	11	12	1	1	2
Shipping &/or Receiving Clerks	12	13	1	1	2
Stock Clerks, Stockroom, Warehouse or Storage	8	9	1	1	2
All Other Plant Clerical Workers	8	8	0	1	1
TOTAL SALES WORKERS	25	27	2	3	5
All Sales Agents, Associates &/or Reps.	25	27	2	3	5
TOTAL ALL OCCUPATIONS	956	1,020	64	102	166

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

PINAL COUNTY (CONTD.)

PROFESSIONAL WORKERS

All Engineers
Civil Engineers
Electrical & Electronic Engineers
Mechanical Engineers

All Other Professional Workers
Systems Analysts, Electronic Data Processing
Accountants & Auditors
Personnel & Labor Relations Specialists
Reporters &/or Correspondents
Right-of-Way Agents
Travel Agents &/or Accommodations Appraisers

TECHNICAL WORKERS

All Other Technicians
Airplane Pilots

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
Mechanics, Automotive
Diesel Mechanics (Excl. Auto & Eng. Equip.)
Mechanics, Maintenance (Excl. Millwrights)
Car Repairers

All Other Skilled Craft Workers
Brakers, Train
Cable Splicers
Carpenters (Excl. Cabinetmakers)
Central Office Repairers
Conductors, Train
Corrosion Control Fitters
Firers, Locomotive
Hostlers
Locomotive Engineers
Maintenance Repairers, General Utility
Sheet Metal Workers
Signal Maintainers

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

Stationary Engineers
Tower Operators
Yard Engineers

All Other Operatives & Semiskilled Workers
Tractor-Trailer Truck Drivers
Ballast Cleaning &/or Tamping Machine Operators
Cable Installers
Cable Repairers
Crane, Derrick & Hoist Operators
Heavy Equipment Operators
Surveyor Helpers
Ambulance Drivers &/or Attendants

CLERICAL WORKERS

All Other Office Clerical Workers
Bookkeeping &/or Billing Machine Operators
Keypunch Operators
Stenographers
Accounting Clerks
Bookkeepers, Hand
Cashiers
Collectors
Payroll &/or Timekeeping Clerks
Switchboard Operators
Switchboard Operators/Receptionists
Ticket Agents
Typists
Clerical Supervisors, Office or Plant
Telegraph Operators
Central Office Operators
Station Agents

All Other Plant Clerical Workers
Dispatchers, Vehicle, Service or Work
Rate Clerks, Freight
Yard Clerks

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

SANTA CRUZ COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	39	42	3	6	9
TOTAL PROFESSIONAL WORKERS	29	30	1	3	4
All Engineers (Incl. Sales Engineers)	4	4	0	0	0
All Other Professional Workers	25	26	1	3	4
TOTAL TECHNICAL WORKERS	1	1	0	0	0
TOTAL SERVICE WORKERS	2	2	0	0	0
Guards & Doorkeepers	1	1	0	0	0
All Other Service Workers	1	1	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	260	277	17	23	40
Diesel Mechanics (Excl. Auto & Eng. Equip.)	15	16	1	1	2
All Other Mechanics & Repairers	5	5	0	0	0
Tractor-Trailer Truck Drivers	12	13	1	1	2
Supervisors, Nonworking	22	24	2	2	4
Line Installers/Repairers	12	13	1	1	2
Plumbers &/or Pipefitters	8	9	1	1	2
Bus Drivers, School	19	20	1	2	3
All Other Skilled Craft Workers	84	89	5	7	12
All Other Operatives & Semiskilled Workers	26	27	1	2	3
All Other Laborers & Unskilled Workers	57	61	4	6	10
TOTAL CLERICAL WORKERS	140	146	6	25	31
Bookkeeping &/or Billing Machine Operators	7	7	0	1	1
All Other Office Machine Operators	2	2	0	0	0
Accounting Clerks	7	7	0	1	1
Bookkeepers, Hand	6	6	0	1	1
General Clerks, Office	46	49	3	10	13
Secretaries	5	5	0	1	1
All Other Office Clerical Workers	31	32	1	7	8
Stock Clerks, Stockroom, Warehouse or Storage	10	11	1	1	2
Dispatchers, Vehicle, Service or Work	6	6	0	1	1
All Other Plant Clerical Workers	20	21	1	2	3
TOTAL SALES WORKERS	8	8	0	1	1
All Sales Agents, Associates &/or Reps.	8	8	0	1	1
TOTAL ALL OCCUPATIONS	479	506	27	58	85

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

PROFESSIONAL WORKERS

All Engineers
- Electrical & Electronic Engineers

All Other Professional Workers
- Purchasing Agents &/or Buyers
- Accountants & Auditors
- Announcers
- Writers &/or Editors
- Reporters &/or Correspondents
- Travel Agents &/or Accommodations Appraisers

MAINTENANCE & PRODUCTION WORKERS

All Other Skilled Craft Workers
- Brakers, Train
- Bus Drivers
- Cable Splicers
- Conductors, Train
- Diesel Plant Operators
- Installers, Repairers &/or Section Maintainers

All Other Operatives & Semiskilled Workers
- Truck Drivers
- Truck Drivers, Heavy (Excl. Tractor-Trailer)
- Heavy Equipment Operators
- Industrial Truck Operators
- Taxi Drivers
- Welders & Flamecutters

All Other Laborers & Unskilled Workers
- Helpers, Trades

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

SANTA CRUZ COUNTY (CONTD.)

CLERICAL WORKERS

All Other Office Clerical Workers
Cashiers
Traffic Clerks
Typists
Central Office Operators
Customer Service Representatives

All Other Plant Clerical Workers
Meter Readers, Utilities

CLERICAL WORKERS (CONTD.)

Shipping Packers
Shipping &/or Receiving Clerks

SALES WORKERS

All Sales Agents, Associates &/or Reps.
Sales Representatives, Agents, &/or Associates
Traffic Agents

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

YAVAPAI COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	90	97	7	13	20
TOTAL PROFESSIONAL WORKERS	71	76	5	7	12
All Engineers (Incl. Sales Engineers)	6	6	0	0	0
Announcers	36	39	3	3	6
All Other Professional Workers	29	31	2	4	6
TOTAL TECHNICAL WORKERS	37	39	2	14	16
Estimators & Drafters, Utilities	8	9	1	1	2
All Other Engineering Technicians	9	9	0	0	0
All Medical & Dental Technicians	20	21	1	13	14
TOTAL SERVICE WORKERS	2	2	0	0	0
Janitors, Porters & Cleaners	2	2	0	0	0
TOTAL MAINTENANCE & PRODUCTION WORKERS	387	409	22	28	50
Diesel Mechanics (Excl. Auto & Eng. Equip.)	7	7	0	1	1
Radio Mechanics	12	13	1	1	2
All Other Mechanics & Repairers	27	28	1	1	2
Truck Drivers	5	5	0	0	0
Tractor-Trailer Truck Drivers	106	113	7	8	15
Cable Repairers	6	6	0	0	0
Central Office Repairers	6	6	0	0	0
Supervisors, Nonworking	23	25	2	3	5
Ground Workers, Utilities	7	8	1	1	2
Installers, Repairers &/or Section Maintainers	6	6	0	0	0
Line Installers/Repairers	24	26	2	1	3
Maintenance Repairers, General Utility	19	20	1	2	3
Helpers, Trades	8	9	1	1	2
Station Installers	10	11	1	1	2
Trouble Shooters, Power Line	6	6	0	1	1
All Other Skilled Craft Workers	17	17	0	0	0
All Other Operatives & Semiskilled Workers	90	95	5	6	11
All Other Laborers & Unskilled Workers	8	8	0	1	1
TOTAL CLERICAL WORKERS	178	189	11	36	47
All Office Machine Operators	3	3	0	1	1
Accounting Clerks	6	6	0	1	1
General Clerks, Office	23	25	2	5	7
Secretaries	17	18	1	4	5
Typists	12	13	1	3	4
Clerical Supervisors, Office or Plant	8	9	1	1	2
Central Office Operators	25	27	2	7	9
Customer Service Representatives	26	28	2	6	8
All Other Office Clerical Workers	28	29	1	5	6
Meter Readers, Utilities	14	15	1	1	2
Dispatchers, Vehicle, Service or Work	6	6	0	1	1
All Other Plant Clerical Workers	10	10	0	1	1
TOTAL SALES WORKERS	20	22	2	3	5
Sales Representatives, Agents &/or Associates	20	22	2	3	5
TOTAL ALL OCCUPATIONS	785	834	49	101	150

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

YAVAPAI COUNTY (CONTD.)

PROFESSIONAL WORKERS

All Engineers
Electrical & Electronic Engineers

All Other Professional Workers
Accountants & Auditors
Broadcast News Analysts
Reporters &/or Correspondents
Right-of-Way Agents
Travel Agents &/or Accommodations Appraisers

TECHNICAL WORKERS

All Other Engineering Technicians
Electrical & Electronic Technicians
Surveyors (Excl. Surveyor Helpers)

All Medical & Dental Technicians
Emergency Med. Techs. (Excl. Ambulance Attends.)

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
Mechanics, Aircraft
Electric Meter Installers & Removers
Gas Meter Installers
Car Repairers
Gas & Electric Appliance Repairers

All Other Skilled Craft Workers
Brakers, Train
Cable Splicers
Conductors, Train
Instrument Repairers
Plumbers &/or Pipefitters
Trouble Locators, Test Desk

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

All Other Operatives & Semiskilled Workers
Truck Drivers, Heavy (Excl. Tractor-Trailer)
Truck Drivers, Light (Excl. Delivery & Route)
Cable Installers
Delivery & Route Workers
Frame Wirers
Heavy Equipment Operators
Pipelayers
Tire Changers
Surveyor Helpers
Line-Service Attendants

All Other Laborers & Unskilled Workers
Oilers
Cleaners, Vehicle
Tree Trimmers

CLERICAL WORKERS

All Other Office Clerical Workers
Bookkeepers, Hand
Cashiers
Collectors
Payroll &/or Timekeeping Clerks
Personnel Clerks
Receptionists
Statistical Clerks
Traffic Clerks

All Other Plant Clerical Workers
Production Clerks &/or Coordinators
Shipping &/or Receiving Clerks
Rate Clerks, Freight

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

YUMA COUNTY

	Estimated 1982 Employment	Projected 1986 Employment	Job Openings Due to Growth 1982-1986	Job Openings Due to Separations 1982-1986	Total Job Openings 1982-1986
TOTAL MANAGERS & OFFICERS	95	102	7	13	20
TOTAL PROFESSIONAL WORKERS	97	103	6	9	15
Electrical & Electronic Engineers	10	11	1	1	2
All Other Engineers	5	5	0	0	0
Announcers	27	29	2	2	4
Broadcast News Analysts	6	6	0	0	0
All Other Professional Workers	49	52	3	6	9
TOTAL TECHNICAL WORKERS	62	67	5	4	9
Electrical & Electronic Technicians	13	14	1	1	2
Estimators & Drafters, Utilities	8	9	1	1	2
All Other Engineering Technicians	27	29	2	2	4
All Other Technicians	14	15	1	0	1
TOTAL SERVICE WORKERS	8	8	0	1	1
TOTAL MAINTENANCE & PRODUCTION WORKERS	492	526	34	43	77
Mechanics, Aircraft	8	9	1	0	1
Mechanics, Automotive	9	10	1	1	2
Hydroelectric Machine & Powerhouse Mechs.	12	13	1	1	2
Radio Mechanics	6	6	0	0	0
All Other Mechanics & Repairers	64	69	5	5	10
Truck Drivers	13	14	1	1	2
Tractor-Trailer Truck Drivers	30	32	2	2	4
Cable Splicers	5	5	0	0	0
Electricians	13	14	1	1	2
Auxiliary Equipment Operators	15	16	1	2	3
Supervisors, Nonworking	26	28	2	3	5
Ground Workers, Utilities	7	8	1	1	2
Installers, Repairers &/or Section Maintainers	6	6	0	0	0
Line Installers/Repairers	21	23	2	1	3
Helpers, Trades	10	11	1	1	2
Station Installers	11	12	1	1	2
Switchboard Operators, Generating Plant	5	5	0	0	0
Welders & Flamecutters	6	6	0	1	1
Line-Service Attendants	51	54	3	6	9
All Other Skilled Craft Workers	70	74	4	7	11
All Other Operatives & Semiskilled Workers	64	68	4	4	8
All Other Laborers & Unskilled Workers	40	43	3	5	8
TOTAL CLERICAL WORKERS	184	195	11	36	47
All Office Machine Operators	2	2	0	0	0
Accounting Clerks	11	12	1	2	3
Bookkeepers, Hand	9	10	1	2	3
General Clerks, Office	33	35	2	7	9
Secretaries	9	10	1	2	3
Clerical Supervisors, Office or Plant	10	11	1	1	2
Central Office Operators	18	19	1	5	6
Customer Service Representatives	20	22	2	4	6
All Other Office Clerical Workers	39	40	1	10	11
Meter Readers, Utilities	10	11	1	1	2
Production Clerks &/or Coordinators	5	5	0	1	1
Stock Clerks, Stockroom, Warehouse or Storage	6	6	0	1	1
All Other Plant Clerical Workers	12	12	0	0	0
TOTAL SALES WORKERS	22	24	2	3	5
Sales Representatives, Agents &/or Associates	22	24	2	3	5
TOTAL ALL OCCUPATIONS	960	1,025	65	109	174

Confidential data for certain occupations, and data for occupations with employment of less than five, have been added to "All" or "All Other" categories or collapsed into major occupational classes as follows:

ESTIMATED EMPLOYMENT AND JOB OPENINGS
TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES

YUMA COUNTY (CONTD.)

PROFESSIONAL WORKERS

All Other Engineers
Civil Engineers
Mechanical Engineers

All Other Professional Workers
Photographers
Television Camera Operators
Purchasing Agents &/or Buyers
Accountants & Auditors
Commercial Artists
Writers &/or Editors
Librarians, Professional
Reporters &/or Correspondents
Right-of-Way Agents
Travel Agents &/or Accommodations Appraisers

TECHNICAL WORKERS

All Other Engineering Technicians
Computer Programmers
Surveyors (Excl. Surveyor Helpers)
Broadcast Technicians

All Other Technicians
Airplane Pilots
Radio Operators

SERVICE WORKERS

Janitors, Porters & Cleaners
Food Service Workers (Exclude Cashiers)
Supervisors, Nonworking - Service

MAINTENANCE & PRODUCTION WORKERS

All Other Mechanics & Repairers
Diesel Mechanics (Excl. Auto & Eng. Equip.)
Electric Meter Installers & Removers
Mechanics, Maintenance (Excl. Millwrights)
Car Repairers
Electronic Mechanics

All Other Skilled Craft Workers
Brakers, Train
Carpenters (Excl. Cabinetmakers)
Central Office Repairers
Conductors, Train
Corrosion Control Fitters
Firers, Locomotive
Instrument Repairers

MAINTENANCE & PRODUCTION WORKERS (CONTD.)

Locomotive Engineers
Machinists
Maintenance Repairers, General Utility
Plumbers &/or Pipefitters
Signal Maintainers
Stationary Engineers
Substation Operators
Trouble Locators, Test Desk
Trouble Shooters, Power Line
Yard Engineers

All Other Operatives & Semiskilled Workers
Truck Drivers, Heavy (Excl. Tractor-Trailer)
Truck Drivers, Light (Excl. Delivery & Route)
Ballast Cleaning &/or Tamping Machine Operators
Cable Installers
Cable Repairers
Crane, Derrick & Hoist Operators
Delivery & Route Workers
Frame Wirers
Heavy Equipment Operators
Pump Station Operators, Waterworks
Surveyor Helpers
Truck Driver Helpers

All Other Laborers & Unskilled Workers
Painters, Maintenance
Refuse Collectors
Tree Trimmers

CLERICAL WORKERS

All Other Office Clerical Workers
Stenographers
Collectors
File Clerks
Order Clerks
Switchboard Operators
Ticket Agents
Traffic Clerks
Typists
Telegraph Operators
Station Agents

All Other Plant Clerical Workers
Shipping Packers
Shipping &/or Receiving Clerks
Dispatchers, Airplane
Dispatchers, Vehicle, Service or Work
Yard Clerks

METHODOLOGY

Sample Selection and Response Rate

Occupational estimates for the TCPU industry were developed from a survey of employers in the state. Employers who were asked to participate in the survey were selected from a master employer file of firms doing business in Arizona, using standardized sampling techniques. A sample of establishments employing 4-99 employees and all establishments having 100 or more employees were surveyed. The entire sample was composed of 726 units with a usable response rate of 90 percent. Firms responding represented 94 percent of the industry's employment.

Employment Projections

Projecting occupational employment and demand is accomplished in two basic stages. First, industry employment estimates are developed for the target years. These forecasts are computed using an econometric model driven by forecast values for variables such as national unemployment, interest rates, and industrial production. Staffing pattern ratios, as determined by the OES survey, are then applied to the industry employment projections and represents the second stage of the methodology.

Employment data represent the annual average for the specified year. "Job Opportunities" indicates the average number of job openings (based on the annual average employment) for the period between corresponding months of the specified years. The projection technique does not possess the degree of accuracy implied by small employment and demand figures.

Job Openings

"Job Opportunities" represents the sum of openings resulting from expansion and replacement during the projection period. Expansion is the numerical difference in employment for a given period. Replacement represents those job openings that transpire due to separations from the labor force, i.e., death, retirement, and pregnancy, and is based on national occupational separation rates.[1] The "Job Opportunities" column does not account for labor turnover, i.e., openings created when a worker changes jobs, leaving the job to be filled by someone else. These vacancies are generally the largest source of job openings.

Limitations of the Data

The projection methods do not account for cyclical, seasonal, and such factors as the sudden opening and closing of large establishments. Caution is advised in the use of employment forecast data for industries with limited employment - especially in the smaller counties.

Employment forecasts for the nonmetropolitan counties are based on growth rates developed for the "balance of state" (Arizona less Maricopa and Pima counties) rather than for individual counties.

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[1] "Tomorrow's Manpower Needs," Supplement No. 4, BLS, 1974, pp. 11-16.

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